

AN INTRODUCTION TO ECONOMICS



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AN INTRODUCTION TO ECONOMICS

FOR INDIAN STUDENTS

BY

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OF THE INDIAN CIVIL SERVICE

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PREFACE

THE object of this book is to provide a statement of the leading ideas of modern Economic Science in terms that will be easily understood by Indian students. The study of Economics in India is rendered unnecessarily difficult by the fact that in its early stages there is so little common ground between the student and his text-books : the knowledge of western industrial life which western text-books assume is not possessed by the student, and the illustrations consequently in many cases only increase the difficulty which they are intended to remove. I hope that the study of the science, which is of such vital importance to the future of India, will be facilitated if its leading ideas can be apprehended in the first place in terms of the Indian field and market-place.

The book is designed to serve as an introduction to the larger text-books and the classical writers, and the main lines of its construction are therefore fixed. In one respect, however, I have ventured to depart from tradition. It will be seen that while the factors of production are at first treated in the traditional order (Land, Labour and Capital), this order is altered in the section dealing with Distribution. The chief consideration that has led to this change is the importance of laying stress on the fundamental unity of the science, and of showing that a thorough study of the

equilibrium between supply and demand is as essential to a mastery of the problems of Distribution as of the problems of Value in connection with which it first appears. Now it is not easy to present this fundamental unity if the traditional order is followed—the student comes first to the subject of rent, with all the complications arising from the special features of land, and when he passes on to wages, his attention is directed to the particular features of that branch of the subject. It seems to me that—at least in the present state of development of the Indian markets—the object in view can best be attained by beginning with the subject of interest, where the fundamental unity is most easily seen, and passing thence to those subjects where other factors in the problem become of relatively greater importance.

It may perhaps savour of presumption if one who has no practical experience in teaching offers suggestions as to the manner in which the science should be taught. But, like other employers, I have been forced by experience to realise that to a large proportion of Indian students of Economics the science is purely abstract, and bears very little relation to the facts of Indian life. I venture, therefore, to suggest that, particularly in the early stages of the course, stress should be laid on the concrete interest of the science, and that students should be provided with opportunities for observing economic facts for themselves, whether in the form of price-lists, market-reports, and selected statistics, or of facilities for seeing how production is actually organised in the neighbourhood of their college. They will thus be helped to realise that the science arises out of the facts of life, and is not a thing to be first learned and then applied to those facts.

I have to thank Mr G. Findlay Shirras of the Indian Educational Service for many valuable suggestions regarding the chapters that deal with Distribution.

W. H. MORELAND.

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BOOK I.

INTRODUCTORY.

CHAPTER I.

THE MEANING OF ECONOMICS

WHEN a student takes up a new subject he wants first of all to know what it is about and what is meant by the words which he has to use. In the case of some subjects this is a simple matter ; the meaning of the words used in them is absolutely fixed, and the student begins by learning their definitions by heart. Thus, the student of geometry usually begins by learning the definitions of such words as point, or line, or circle ; and when he has once learnt them he knows that all through the course in geometry they have precisely the same meaning, and that there is no risk of his being misled by a word being used sometimes in one sense and sometimes in another. There are, however, subjects, and Economics is one, where this method is not applicable, because all writers are not agreed on the meanings of the words used ; the words are used in ordinary conversation vaguely, and with more meanings than one, and even when a writer defines the sense in which he intends to use a word he sometimes uses it in another sense, and may thereby mislead his readers. In studying such subjects it is necessary to examine the meanings which each writer attaches to the words used, to be constantly on the watch for double meanings, and to use qualifying adjectives when there is any risk of a misunderstanding.

Now the Science of Economics consists of the study of the Laws of the Production, Consumption and Distribution of Wealth; or, speaking popularly, how men or nations get Wealth, and what they do with it. Each one of the words printed with a capital letter in the last sentence needs careful examination.

Economics, the name of the science, is formed from the noun economy, which in current English use has more meanings than one. It is derived from the Greek language and originally meant 'management of the household'; and in popular use it is still closely connected with the idea of household expenditure, since we speak of a person spending his income with proper economy, or being economical in his habits. But the scientific use of the word has developed in a different direction. First it was used for management generally and not merely management of the household, and then more definitely for the management of the State. The men who began the study of the science were chiefly interested in finding out the principles on which the State should provide for the production of wealth, and because of this fact the science was at first named Political Economy, or in other words the economy, that is the management, of the State, but the word 'political' itself has many meanings, and the shorter name Economics has gradually been adopted in its place. Economics has nothing whatever to do with being economical, we may praise a man for avoiding waste, that is, for being economical, but the science of Economics has nothing to do with praise or with blame.

Next we come to the word Law. This has two principal meanings which can be distinguished quite clearly, but over and over again people have confused them, and students beginning Economics should stop every time they come to

the word and remind themselves of the sense in which it is used. In ordinary talk a Law means a command addressed to the people in general, and telling them to do, or not to do, something; and Law, or Laws, indicate a body of such commands. In India these laws or commands are either drawn from the Sanskrit or Arabic writings, or are in the form of Acts passed by one of the Legislative Councils: much of a Hindu's conduct is commanded by the Shastras, while a Muhammadan is guided largely by the Koran and the Commentaries, and all alike are subject to the Indian Penal Code and other Acts passed by the Council.

But in science there is no idea of telling people what to do. In science a Law is simply a statement that *something is likely to happen in certain conditions*, and when we speak of the Laws of Matter or of Motion, or of Economics, or of Political Science, we are referring to the conclusions that have been drawn from experience as to what is likely to happen when certain conditions exist. Everybody is familiar in a general way with many 'Laws' in this sense of the word. It is common knowledge for instance that water will flow downhill, and the physical sciences are usually based on these general laws, which are developed and made definite as the result of successive experiments, and of argument as to the meaning of the experiments, until a large body of conclusions has been drawn as to what will happen in very various conditions. Thus we now know, not only that water will flow downhill, but the rate at which it will flow down a slope of any given steepness, the size of an embankment required to prevent it flowing, and many other conclusions, with the aid of which engineers are able to construct drainage-schemes or irrigation-canals, and to supply towns and cities with pure water drawn from a distant source. These 'laws' of the movement of water in

given conditions, which constitute the science of hydraulics, do not tell people what to do or what not to do. The engineer learns from them how to achieve his object, and in popular talk he may be said to 'obey' them just as a man obeys the Penal Code, but this use of the word obey is figurative, and may mislead. In the first case, a man knows what is likely to happen and makes his plans accordingly; in the second, he refrains from doing something because it is forbidden by the order of the Government, which will punish him if he disobeys.

Now Economics, like the physical sciences, is based on the every-day experience of the world, and endeavours to state that experience in a set of conclusions which will show what changes in regard to wealth are likely to follow from changes in the conditions under which people live. These conclusions are called laws, but it must be repeated that they do not form commands, that is, they do not tell people either how they should get wealth, or what they should do with it when they have got it.

There is one obvious difference between the position of the physicist and that of the economist. The former can carry out experiments on a very large scale, that is, he can make the conditions and see what happens, while the economist can very rarely experiment, but must content himself with watching the changes that take place in conditions, and their results, and arguing as to the meaning of his observations. The student of the movements of water, for instance, can make water flow down any sort of channel he cares to construct, and can measure the velocity of the flow in the conditions he has produced: but the economist is not dealing with water or clay, but with the human beings who produce and consume wealth, he cannot make them alter their ways of working or of

living at his pleasure, but only observe what happens when the conditions change. It is largely owing to this reason that in the science of Economics the conclusions or 'laws' are far less definite, and open to many more exceptions than is the case in sciences where systematic experiments are possible. It is very difficult to be sure that we have not overlooked some change in the conditions that has taken place, and even serious students may thus be misled and may attribute a result to a cause which, in fact, has had little or nothing to do with it, just because they have overlooked the true cause or causes. The same danger of mistake is, of course, more frequently run by writers in the press, who in many cases have never studied any branch of the subject, and may find themselves called on suddenly to explain changes that excite public interest, such as a rise in prices, or an increase in exports. Much that is misleading appears in the press on such subjects, and students will be wise not to accept everything they read, but to wait until their study of the laws of Economics enables them to draw conclusions for themselves and to criticise the conclusions drawn by others.

It will be obvious that in order to understand these laws of which we have been speaking, a student must know a large number of the facts on which the laws are founded. Here, as we have said, he is at a disadvantage compared with the student of a science such as physics, who can satisfy himself by experiments in the laboratory that the laws which he is studying really hold good. The student of Economics has no laboratory, and he cannot as a rule ascertain or verify many of the facts for himself. He has therefore to take them from books, and a large part of his studies will consist of Economic History and of Statistics. Economic History means the history of the

production, consumption and distribution of wealth among various nations in the past, Statistics mean facts bearing on the same subjects, stated in figures and arranged so as to show the changes that are in progress. But the study of history and statistics is made very much easier by a preliminary knowledge of the chief conclusions or laws that have already been based on them, and so it is best for students to begin by acquiring such a knowledge, illustrated by facts already familiar to them, and then to study the laws in more detail and in the light of history and statistics.

The word Science, which we have already applied to the subject of Economics, requires a short explanation. Originally it meant simply knowledge, but its use is now restricted to a certain kind of knowledge, namely the knowledge of some particular subject stated in the form of laws (in the sense which has been explained). Thus the knowledge that water runs downhill is not in itself a science but the science of Hydraulics has gradually grown up as the behaviour of water in various conditions has been ascertained and stated in more or less definite terms. In the same way, there was a time when no science of Economics existed, simply because the facts had not been studied and conclusions had not been drawn. The study is even now by no means complete, but it has made so much progress that laws or conclusions have been drawn dealing with most of the more important facts, and it can now, therefore, be properly described as a science.

CHAPTER II.

THE MEANING OF WEALTH, AND VALUE.

WE have now to explain the meaning which is attached to the word Wealth, the subject-matter of our science. This word, like most of those which we have to use, is commonly employed in ordinary language, and as was said in the last chapter, we have to be careful that whenever we use it we use it in a definite sense. When in ordinary talk we speak of a man's wealth, we probably think first of all of the things which we know he owns · his land and houses · his carriages, horses, elephants and motor cars : his gold, silver and jewels : his money lent to Government or to private persons, or invested in railways or factories, or in coal-mines or other industries. If we want to compare the wealth of two men, it is things like these which we take into account · only in order to make the comparison we think of the total money-value of such things, and say that one man's wealth is so many rupees or so many lakhs, and that another's is so many rupees or so many lakhs more or less.

Now the things which we have named, and the various other things which we speak of as wealth, are at first sight very different from each other but if we class them in ordinary talk under the single word wealth, it means that they have all some important quality in common, and to

make sure what we mean by wealth we have to find out what this common quality is. What quality is common to land, and elephants, and diamonds, and Government paper, and the other things that we speak of as wealth? The answer is that they are all things which we should like to possess for ourselves.

It is true that in most countries persons will be found who do not wish to have such possessions of their own, and the number of such persons is probably larger in India than in Europe, because of the tendency to adopt an ascetic way of life, the sincere *sannyasi* or *fakir* is distinguished from the rest of us mainly by the fact that he does *not* want to possess things of the kinds which we have named. But even in India sincere ascetics form only a very small proportion of the population, and leaving them out of account it is correct to say that ordinary people want to possess the same kinds of things, and that among the things they want are those which we are discussing.

We may say then that all the things of which we usually think when we speak of wealth are *desirable*, that is to say, they are things which ordinary people would like to have. But while all the things we speak of as wealth are desirable, all desirable things are not spoken of as wealth. Family affection and friendships for instance are desirable things, but we should never speak of them as part of a person's wealth; nor indeed would it be possible for us to do so if as is usual we reckon the various items of wealth at their money-value, for we cannot assign a money-value to such possessions, much as we may desire them. Most of us again desire such things as good health or skill at games, but they are certainly not wealth in the ordinary sense of the word. In order then to settle the meaning of the term wealth as ordinarily used, we have to see what

kinds of desirable things it includes, and what kinds it excludes.

Desirable things can be classified in various ways. One obvious distinction is between those that are material, that is to say, those that we can see and handle, and those that are non-material and so cannot be recognised by our senses of sight and touch. The things which we have enumerated at the beginning of this chapter are all material ; and it is correct to say that most material desirable things are included in the ordinary use of the term wealth. Non-material desirable things are of two kinds. One kind, which may be called internal, includes such things as good health, or ability in business, or skill in a profession ; such qualities may be employed in order to obtain material things, but in ordinary talk we do not count them as wealth though they may be employed as sources of wealth. The second kind of non-material things may be called external : they are not qualities of the person himself, like skill or ability, but arise out of his relations with other people. The commonest example of them is what is spoken of variously as ' good-will ' or ' practice '. A successful shopkeeper who wishes to sell his business will charge not only the price of his stock of things for sale, and of his shop (if he owns it), he charges something more for ' good-will '. The buyer will pay for this because he knows that he is more likely to succeed in carrying on a shop with a reputation already made, where people are accustomed to deal, than if he opens a new shop and has to persuade people to come and deal there. the ' good-will ' of the shop is in fact a desirable thing, and he is willing to pay something for it. This fact explains why in some towns it is quite rare to find a trader or shopkeeper doing business under his own name : the firm may have changed hands several

times, but the names of the original owners are retained in order that the old reputation of the firm may not be lost. In the same way a successful doctor or dentist can sell his 'practice' as it is called in this case, that is, some other doctor or dentist will pay him money in order to succeed him and have a chance of treating the patients who would have come to him. We do not perhaps hear much of 'good-will' or 'practice' in ordinary talk, but among business or professional men the thing is very real, and its value is taken into account in considering the wealth of a person or a firm.

In ordinary talk then, we mean by wealth most desirable things that are material, and a few that are non-material and external, such as practice and good-will. We say *most* things that are material, because some classes of these are commonly excluded. Things like good roads or a well-drained town, are clearly desirable, but though they are great conveniences to an individual we do not, as a matter of fact, regard them as part of his wealth. We limit the use of the word to things which a man can sell, or give away, and if we want to know whether a thing is classed as a man's wealth or not, the simplest test is to see if he can sell it or transfer it to some one else.

Thus then is the ordinary meaning of the word Wealth. Writers on Economics have defined its meaning for their own purposes in various ways, and the word does not include exactly the same things in all books on the subject: students have therefore to be careful that they understand the meaning adopted in each book which they read. But modern English writers as a rule aim at using the word as nearly as possible in its ordinary meaning, and following this practice we shall use it in the sense explained above.

For some purposes, economists have to consider the wealth of a nation or a community as distinct from the wealth of the individuals of which it is composed. The wealth of a nation includes firstly the total wealth of those individuals, and secondly a variety of things which are not counted as individual wealth. If we know the amount of the wealth owned by the individuals, it is merely a matter of arithmetic to ascertain the total, the difficulty of making the calculation lies in finding out the amount of the wealth of the individuals, and this difficulty is felt very seriously in a large number of economic investigations. The student however will not feel this difficulty until he has advanced sufficiently far to think of undertaking such investigations for himself, and in the early stages it is enough for him to know that this difficulty exists, and that the accurate calculation of the wealth of any large number of individuals requires a great deal of labour as well as a trained and acute judgment. The second group of things which are included in national wealth are those which are the property of the nation as a whole or of some subdivision of it, and not of its individual members. This group includes such things as railways and canals owned by the State, public buildings, and the material equipment required for the work of Government, whether it be the store of gold and silver held by the Treasury, or things like mail-carts and pillar-boxes. In addition to such material things, some writers include in national wealth various non-material things, such as the organisation of Government. Here too the exact limits of national wealth are not at first of much practical importance to the student: the important point is that when he reads anything on the subject he should make quite certain what elements that particular writer includes in the term.

Further, a considerable proportion of the national wealth may be made up of things owned collectively by portions of the nation rather than by the nation as a whole. Thus, if an economist should attempt to calculate the wealth of India, he would have to reckon, first the wealth of all the individual inhabitants, then the wealth owned by the Government of India, then the wealth of each provincial Government, and then the wealth of local bodies such as district or municipal boards, and even of village-communities in places where these have a recognised legal position and possess wealth of their own. The provinces, for instance, own roads and bridges and embankments, as well as buildings for various purposes; municipal boards own streets and drains and lamps, and may own waterworks or tramways or other undertakings; the district or local board owns roads and bridges, or schools and dispensaries; while even a village *panchayat* may own wells or tanks or drains. All such things form part of the wealth of the nation. In the same way account must be taken of all wealth owned by other public or private bodies, property belonging to a temple or a mosque, or owned by a charitable committee, or by the governing body of a college, is all part of the wealth of the nation.

Lastly, in reckoning the wealth of either an individual or a community care must be taken to deduct the amount of his or its debts. Thus, if a landholder has mortgaged a village, we must not include in his wealth the full value of the village, but must deduct the amount of the mortgage. So if a municipal board has borrowed money to construct waterworks, the amount of its debt must be deducted from the value of the works, and in the same way a nation must allow for the money it has borrowed to construct railways or canals or for other purposes.

Enough has now been said to indicate in general terms the meaning that is attached to the word wealth, but students must be careful not to think that they understand it merely because they have read so far. In this case, as with almost all the words we shall have to explain, it is not enough to learn a definition by heart: we must realise what it really means, and it is an excellent practice to test our knowledge of it by applying it to things that we see in the course of our daily life. For instance, a student walking to college in the morning may ask himself. Are the roadside trees wealth? and whose wealth? Is the mission-church wealth? and whose wealth? Is the fountain wealth? and whose wealth? Is the college hockey-ground wealth? and whose wealth? Discussion of questions such as these in the light of whatever definition of wealth is used in their text books will soon familiarise students with the idea in a way that no study of the books themselves can be expected to do.

The word Value is closely connected with the idea of wealth, and its meaning must be indicated at this point. This word again is in ordinary talk used vaguely, when we speak of something as 'valuable' or 'of great value' we are usually referring to some standard or ideal and praising the thing because it comes near to our ideal. In Economics the word makes no such implied reference, but is used in a definite sense which must be clearly understood.

We start with the fact that people constantly exchange portions of wealth for one another, and the Value¹ of a thing

¹ Some writers distinguish two senses of the word, called, 'Value in Exchange,' and 'Value in Use'. In these writers 'Value in Exchange' has the meaning assigned in the text to 'Value,' while 'Value in Use' means what we shall speak of later on as 'Utility'.

means simply the quantity of some other thing for which it is exchanged. Thus Value is a relative term, and implies that one thing is compared to another. If there were only one thing in the world, the idea of value could not exist because no exchange would be possible. For instance, a cultivator who wants a ser of *ghi* may obtain it by buying it at a shop, or, he may get it from a neighbour in exchange for say sixteen sers of wheat. If the two agree on this rate of exchange, then, so far as that transaction is concerned, the value of one ser of *ghi* is sixteen sers of wheat, and the value of one ser of wheat is one-sixteenth of a ser of *ghi*. These are not two facts, but merely different ways of stating the same fact, namely the relation in regard to value that exists at that moment and in that place between wheat and *ghi*. If the cultivator takes the other course that is open to him and buys a ser of *ghi* at a shop for one rupee, then we may say either that the value of a ser of *ghi* is one rupee, or that the value of a rupee is one ser of *ghi*. The two statements mean exactly the same thing.

All nations have found it convenient to make use of a single article, or a small number of articles, as money; and the word Price is simply a short way of expressing the value of a thing in terms of money. To say 'the price of *ghi* is one ser the rupee,' is precisely the same as to say 'the value of one ser of *ghi* is one rupee.' The subject of Money will require much study at a later stage, but for the present we accept its existence as a fact, and we use it, as we have already said, to measure the amount of wealth, we take each item of wealth at its price, that is, at its value expressed in money, and add up these prices or values so as to get the total value of all the items.

CHAPTER III.

THE MEANING OF PRODUCTION AND CONSUMPTION.

WE have now seen what is meant by the term Wealth, the subject-matter of Economics ; it includes most material things, and also a few non-material things, such as ordinary people would like to possess for themselves, and which they can transfer to others. The Laws of the science relating to it are usually studied in three main groups, which deal with the Production, Consumption and Distribution of wealth.

Production means the study of the way in which wealth becomes available for use. Consumption is just the opposite of Production, and means the study of the way in which wealth is used up and ceases to be available. Distribution deals with the way in which wealth comes into the possession of particular people or groups of people.

It is necessary for students to take up one branch of the subject at a time, but it is most important that in doing so they should not forget the existence of the other branches. When studying Production, for instance, it is necessary to remember that the production of wealth is not a thing by itself : wealth is produced by men in order that they may consume either the wealth which they produce or else other things for which they exchange it. So in studying

Consumption we must not forget that most of the men who consume are also producers, and that their consumption must depend largely on what they can produce.

The first thing is to make quite sure what happens when wealth is 'produced' or 'consumed.' We have seen that most wealth consists of material things, but we must not think that the processes which we are studying involve the production or destruction of matter. This is an impossibility, as the various physical sciences teach us : we can change the form or the arrangement of matter, but we cannot destroy it, nor can we bring new matter into existence. The meaning in which the terms production and consumption are used will become apparent if we examine a few instances.

Take, for instance, a tailor making a coat. He cuts from a roll of cloth pieces of the required shape and sews them together with thread. he does not make the cloth or the thread, but he re-arranges them, and (if he has done his work properly) the purchaser obtains a comfortable and well-fitting coat, which is for him a useful thing, more useful than the original piece of cloth would be. It may be said that though the tailor makes nothing new the weaver does ; but if we watch a weaver at work we shall see that he merely takes pieces of thread or yarn and re-arranges them so as to produce the cloth. The weaver does not make new matter any more than the tailor does, but he arranges thread or yarn in such a way that it becomes more useful to the tailor. In the same way the spinner merely takes cotton, or wool, and arranges it in the form of thread or yarn in which it becomes useful to the weaver. So far, then, anyone can see for himself that the spinner, the weaver and the tailor do just the same kind of work, each of them taking some form of matter and re-arranging

it so as to make it more useful. The earlier stages in the processes of production are of exactly the same nature, but this is not so easily apparent to the student unless he has acquired some knowledge of the sciences of chemistry and physiology, and of their applications to the arts of agriculture ; and, in fact, there was a time when the cultivator was considered to do something different from the artisan. But it is now well known that the cultivator can only re-arrange the matter of the soil, put the seed in it and apply fresh matter in the form of water or manure ; the plant is not new matter, but is built up from the gases present in the air, and from the water and other matter present in the soil. Thus the cotton-fibre from which the spinner makes yarn is not new matter produced by the cultivator, but is built up from the air and water and soil, and the cultivator's work consists in making these more useful to the spinner, just as the spinner in his turn is making things useful for the weaver. In the same way the wool that grows on a sheep's back is not new matter, but is formed from the food which the sheep has eaten, and that food is formed from the soil and the air exactly in the same way as the cotton-plants are formed. The shepherd who rears the sheep thereby makes the transformation possible from matter in the form of grass and herbs to matter in the form of wool, that is, into something more useful to the spinner.

Everyone, then, who is concerned in the production of a coat, or of the materials from which it is made, takes his part in rendering some portion of matter more useful for the purpose. In this connection the word 'useful' means the same thing as 'desirable,' both alike indicating that some want is satisfied, and all the workers to whom we have referred are thus producers of some material desirable

thing, that is, of some wealth. The fact is commonly expressed in the phrase that man produces not matter but *utilities*, the word utility is, of course, closely connected in origin and in meaning with the word 'useful'

If we examine other forms of production, we shall see that in their case also what is produced is not new matter but new utilities. The maker of sweetmeats uses sugar and milk and *glue* and other materials so that the product of his work satisfies a particular want or set of wants; the potter takes clay and shapes it in the form of plates or vessels, the carpenter uses wood and nails to make a box or a table, and if students will examine from this point of view the work of all the artisans or factories with which they are familiar they will see that in all cases the nature of the process is the same. existing matter is transformed and re-arranged so that it becomes more adapted to meet some particular want, or, in other words, so as to increase its utility

Stated in this way, the conclusion will probably appear to be obvious, and when it has been thoroughly grasped the student will have no difficulty in seeing that the word Consumption denotes processes of exactly the opposite kind. Men do not consume matter, but only *utilities*; that is to say, the amount of matter present in the world is not diminished by the act of consumption, but some of it is re-arranged so that it is no longer capable of satisfying a particular want. Thus, when a man eats sweetmeats, his desire for them is satisfied by the process of eating, the matter of which the sweetmeats are composed is not lost, but (as the study of physiology shows) it is used up in the body and eventually returns to the air, the water or the soil, the sources from which it was originally drawn. Or when a man lights a fire to warm himself or cook his

food, his want for heat is satisfied by the fire, but at the same time the matter forming the wood is dispersed into the air as smoke or steam, or left in the form of ashes, and is now no longer capable of satisfying a want for heat.

There is one distinction among methods of consumption which is of some practical interest. In the cases we have stated the utility is destroyed in a single operation, by eating the sweetmeats or burning the wood; but apart from food and fuel, most forms of wealth may be used for a considerable time, and their utility is only gradually consumed. A coat, for instance, may be worn for many months, and continues to satisfy a want the whole time it is worn; but it will not last for ever. The cloth of which it is made gradually becomes thinner until holes begin to appear, and then the coat is worn out, that is, its utility is consumed. A watch should last far longer than a coat, and will satisfy its owner's want whenever he wants to know the time; but eventually it will cease to show the time correctly, and then its utility is exhausted. A few kinds of wealth last so long that their utility appears to be indestructible; golden ornaments or diamonds may thus satisfy the wants of many successive generations of owners. It is probable that even such things wear out in the end, but we may say that articles of wealth are of all kinds, from those that are consumed in a single use to those that, when once they have been obtained, continue to satisfy a want for an indefinite period.

Now a large part of the life of all ordinary men is spent in producing and consuming utilities, that is to say, in producing wealth to satisfy their wants and in consuming wealth in the satisfying of those wants. When, therefore, we are studying the production and consumption of wealth, we are at the same time studying a large part of the lives

of men. As Marshall says,¹ "Economics is a study of mankind in the ordinary business of life, it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of well-being. Thus it is on the one side a study of wealth, and on the other, and more important side, a part of the study of man." It follows that the science may be defined in more ways than one. The earlier writers defined it in the way mentioned in Chapter I., as the study of Wealth, while the quotation just given is equally a definition from the other point of view.

There is no contradiction between these definitions, because wealth itself is a thing that can only be defined with reference to man. Wealth-consists, as we have seen, of desirable things, that is, of things which ordinary men would like to have, and we cannot think of wealth without first thinking of men, because wealth is made up of things that men want. This fact is important in classifying Economics among the sciences. Those sciences which are called physical in the broad sense are independent of the existence of mankind, to take our former illustration, if there were no men in the world the laws of hydraulics would still be true, water would flow downhill, and so on. But the sciences classed as moral (Economics, Ethics, Politics, etc.), assume the existence of men as we know them, and study man's actions from various points of view; and Economics in particular directs its attention to those actions which, to repeat Marshall's phrase, are "most closely connected with the attainment and the use of the material requisites of well-being," that is, with the production and consumption of wealth.

¹ *Principles of Economics*, I, 1 1.

CHAPTER IV.

SOME ASSUMPTIONS.

THIS study of wealth, which is also the study of a large part of human life, is not an easy or a simple thing, because life itself is not simple ; we have to approach it by degrees, and to simplify the early stages as much as possible. In order to do this, we make certain assumptions, the effect of which is to limit the extent of the subject ; at a later stage, when we have mastered the subject within these limits, we can go beyond them and extend our knowledge further. In this chapter we shall explain some assumptions that we find it convenient to make, and students must remember that these assumptions hold good throughout this work ; they must not think that the same assumptions are made by all writers on Economics, but they must be careful to note the assumptions that each writer makes, so that they may be sure what he is writing about.

In the first place, we are considering ordinary men and women. We are not limiting our attention to people of any particular race ; we recognise that one race differs in many respects from another, but we confine our attention mainly to the points in which they do not differ. Different races, for instance, want different kinds of food ; some races want meat and others do not ; we are at present concerned not with these differences of detail but with the main fact

that people of all races want food Different races again have different ways of enjoying or amusing themselves ; we are concerned only with the fact that all races want enjoyment or amusement in some form of other. When we want to illustrate or explain particular features of human life, we shall as a rule take our illustrations from those races which are familiar to our readers, that is, from the races inhabiting Northern India , this does not mean that we are considering only those races, but that we are using them as illustrations of human life in general

In the second place, we assume that the human race is grouped in nations or states with organised governments. This is the case over much the most important part of the world, and we leave out of account those parts of it where there is no effective government, and where people can steal and cheat without fear of the police or of the law courts Governments are of many different kinds, but we are not at present concerned with these differences ; their common feature is that the ordinary man is allowed to hold property, that is, to own wealth for himself, and that he can claim the protection of the police and the courts against persons who try to deprive him of his property

In the third place, we assume that the people are living in a condition which we shall describe as Industrial Freedom : this means that ordinary persons are free to choose the way in which they shall produce wealth and to decide on the manner in which they shall consume it This freedom is not supposed to be unlimited, because all governments restrict it to a greater or less extent, but the restrictions are exceptional and freedom is the rule Thus, in India, a man is free to make his living by cultivating the land, or by working as a labourer, or by keeping a shop, or in various other ways , he is not bound to work for a definite

wage, but is free to take the highest wage-he can get , nor is he bound to sell or to buy anything for a fixed price, but can buy or sell what he likes if he can agree on a price with the other party to the transaction.

There are restrictions on this freedom in India as elsewhere. No one, for instance, may distil spirits, or sell opium, or buy fire-arms, or do various other things, without special permission from government: or again, some professions, such as that of a pleader, can be practised only by those who have undergone a special training. Such restrictions as these have to be borne in mind when we are considering any of the special trades, or occupations, or professions, that they affect , but after counting up all the restrictions that exist, we can see that they make little difference to the economic life of the country taken as a whole, and that it is safe to leave them out of account when we are dealing with the main course of business, the production and consumption of food, and clothes, and houses, and the like.

One restriction of great importance to our subject is found in the laws in force in most parts of India which limit the freedom of the landholder in ejecting his tenants and in enhancing their rent This restriction will be considered in Book V.

Apart from interference by government, Industrial Freedom may be limited in practice by the customs and the views of various classes of the people ; such limitations can sometimes be neglected, while at other times special allowance must be made for them In India we have to allow in this way for the existence of the system of Caste, which has an important influence on the daily business of a large part of the population.

In the fourth place, we assume for the purposes of this

He can arrange the names of the boys in order of merit, but the question still arises where in the list he can draw a line and say that all above it are good and all below it are bad. A good many of the distinctions that have to be drawn in Economics are of this latter kind; there is no difficulty in putting most things into one class or another, but some of the things are on the border-line between two classes, and their classification is difficult. In this first sketch we shall as a rule neglect the things that are on the border-line, though they may be of considerable interest in themselves. It is possible, for instance, to discuss at great length questions such as the exact limits of the term Wealth, or of the term Capital, and to point to things that are on the border-line of any definition which we may adopt: such discussions are of value because they help us to be perfectly sure what our definitions mean, but they can most conveniently be taken at a later stage, and when students are beginning the science it is wisest to concentrate their attention on the main facts, and not to spend much time in examining the exact limits of the distinctions that have to be drawn.

BOOK II.
PRODUCTION.

CHAPTER V.

THE FACTORS OF PRODUCTION.

WE have seen in Chapter III that the expression Production of Wealth means the arrangement of portions of matter so as to make them more useful, that is, more fit to satisfy some want. We have now to examine the conditions under which this process of re-arranging portions of matter is carried out.

Let us take a very simple case of an individual who produces a small amount of wealth in a very primitive way. We will suppose that a man earns his living by gathering grass on waste land, and that every day he carries a load of grass to the market and sells it for money, which he spends on his food. Such a man is producing wealth, because he is changing the position of some matter, that is of the grass, so that it will meet the wants of people living in the town, who desire to have grass to feed their horses or cows, and who are therefore willing to give some money in exchange for it : the grass on the waste land will not satisfy this want because there are no people there, and where there are no people there can be no wants ; it has to be gathered and brought to a place where people live, and then it becomes wealth because there are wants which it can satisfy. In other words, the man whom we are considering is producing a new Utility by bringing the

of a pony, he will then be the owner of the pony as well as the reap-hook, and he will make an income substantially larger than is required to satisfy his daily wants. From this point it would be open to an enterprising man to advance steadily in accumulating wealth; he could now take a contract for supplying grass to a stable or dairy; by borrowing money on the strength of his contract he could buy more ponies and hire men to work for him; and it is conceivable that in process of time he might become a wealthy contractor, engaged in many other productive enterprises.

Now let us examine the conditions under which such a man is able to produce enough wealth, first to keep himself alive, and then to establish a productive enterprise that gives him an income larger than is required to satisfy his immediate wants. In the first place, there is the waste land with grass growing on it. If there were no such land within walking distance of the market, he could not support himself in the way that has been described, and when his enterprise extends, its growth must be limited by the amount of suitable land within his reach.

Secondly, there is the work that he does in gathering or cutting grass and bringing it to market. Nobody would do this kind of work for pleasure, he does it because, though it is unpleasant, it is not so unpleasant as going without food. At a later stage he may pay other people to do this work for him, but the work has to be done by someone if the wealth is to be produced, and people cannot be found to do it unless they expect to receive at least a portion of the wealth that is produced.

Thirdly, there is a certain amount of existing wealth, which is used in producing more wealth; the existing wealth is in this case first the reap-hook and then the pony

Or take an artisan who makes, say, brass vessels in his house in the bazar. He does not, like the cultivator, need some acres of land, but still he must have some space to work in, with room for his furnace and his lathe ; that is to say, he must have some land. He must work, and he may need to pay labourers to work with him the furnace has to be managed, the moulds made, and the rough vessels to be turned on the lathe, filed and polished. He must have capital, too—his lathe and other tools, and the brass which he melts in the furnace, as well as some money to buy food and to pay wages.

A large factory requires exactly the same factors of production, though as a rule in much larger quantities. A cotton-mill or a jute-mill, for instance, must have land on which to erect buildings. It may employ hundreds or even thousands of labourers, and its capital may be worth several lakhs of rupees, represented partly by the buildings, engines and machines, partly by the stores of fuel and raw material, and partly by the goods in process of manufacture and the sums paid away in wages.

A railway may be taken as another illustration of a productive enterprise. It is true that people may occasionally be met who argue that a railway does not add to the amount of wealth, but only moves wealth from place to place, but this argument cannot be applied to wealth in the sense in which we are using the word. Wealth consists of things that are useful in satisfying wants, and it is impossible to contend that the ordinary wants of people can be satisfied by things which are not within their reach. People living in Calcutta or Lucknow who want fuel cannot be satisfied by wood while it is lying in the forests of the Himalayas, or by coal collected at the mines in Bengal. The wood or coal must be brought to the place at which the wants

CHAPTER VI.

LAND

THE term Land, as used by economists, means something more than the surface of the ground which we see. Besides the surface it includes ·

(1) The minerals found below the surface, such as coal, iron-ore, gold, or petroleum, as well as the underground water, which is by far the most important mineral in the agricultural regions of India ,

(2) the water covering the surface, as in rivers and lakes ,

(3) the influence on the surface of sunshine, air and rain, which reach it from above.

The distinguishing feature of the things classed as land is that men cannot increase their quantity No matter how much a landholder may want coal, he cannot produce from his land more coal than exists there by nature , no matter how much a cultivator wants sunshine or rain, he has to be content with what reaches his land by the natural processes Some economists prefer therefore to use the term Nature to denote what others describe as Land But the latter term is more generally used, and it is probably the more convenient , the word Nature has many shades of meaning in ordinary use, while Land gives us a definite idea if we remember that it includes what is below the surface and what reaches the surface from above.

The quantity of land is limited The surface of the Indian Empire covers one and a half millions of square miles, and this could not be increased by any means other than taking land from some adjoining country And all of this limited quantity of land is not equally useful for all purposes, so that a producer wants not merely a certain quantity of land, but a certain quantity of land in a particular situation Thus the artisan wants for his workshop a situation where he can get his raw material easily and also sell his produce, in ordinary cases, that is, he wants a piece of land situated in a town, and not in the open country or on the top of a mountain For a factory the site must be convenient for bringing in raw material and fuel, and for despatching goods to purchasers in modern India this means that it must be near either a navigable river or a goods station, it needs also a good water-supply, and it must be near a town in order to be able to find a sufficient number of labourers A railway which is to connect two towns must have a strip of land extending from one town to the other no other land will serve its purpose For the production of minerals, the presence of the minerals below the ground is not enough there must be means of carrying them to places where they will meet a want, and minerals may lie untouched for centuries until a railway is made through the land where they exist Cultivators are no less dependent on situation than other producers; but there are special conditions which affect their needs, and these can best be discussed separately from the needs of artisans and manufacturers

Leaving then agricultural land out of account, the suitability of land for productive purposes depends mainly on its position or situation, and on the means of communication between it and other land Where the conditions make

a particular area specially suitable for production, there is not, as a rule, room for all the people who want a portion of it, and then it is let or sold to those who will pay most for the privilege : and this is the chief explanation of the high cost of land in towns, where land has to be measured by the yard rather than by the acre.

Production (other than agricultural) is as we have seen largely concentrated in cities or towns, that is, in more or less defined areas where the houses and other buildings stand close together, and a short glance at the history of a few Indian cities and towns will enable students to realise the importance of situation and of facilities for communication. We will glance then at the history of Delhi and Kanauj, Cawnpore and Kalpi, Murshidabad and Calcutta. students will find it interesting to trace in the same way the story of the towns and cities with which they are familiar, using *The Imperial Gazetteer of India* to supply them with the facts.

Delhi has been the site of a city since the beginning of history, and we do not know for certain the reasons that first led to the accumulation of people there. It is fairly safe, however, to infer that its suitability resulted from its position in regard to the Jumna, which gave an assured water-supply, and also a means of communication by boat—and it must be remembered that, until railways were built, the river-boats were of the greatest importance both for trade and for travellers. The lie of the country, too, is such that an armed force can control the crossing of the river, and this was always a most important matter so long as the land of India was in the hands of numerous independent kings. Thus, as the *Māhābhārata* tells, Delhi was a capital city in the time of the Pāndavas, and all over the world it is true that the places chosen by kings

as their capitals have become centres of production, because the presence of the king's court and armies supplies a market which makes the city a suitable place for artisans to settle. The city was again a Hindu capital in the twelfth century, and when the Muhammadans conquered its Hindu rulers they too established their capital there, and successive Muslim dynasties maintained, with short interruptions, their capital in the same locality though they shifted the actual site on more than one occasion. Its importance as a capital city declined in the eighteenth century and ceased in the nineteenth. but by that time the establishment of secure peace in the country and the opening of means of communication had made it a large centre of trade, inhabited by enterprising merchants. When railways were built, they naturally came to a city of such importance, and the facilities they gave increased the trade further, while some of the inhabitants had the enterprise to establish factories of the modern type, producing cotton cloth, flour and other articles of commerce. Thus at the end of the nineteenth century, though there was no longer a court or a large army, the trade and industries of the city were sufficient to support a large population, while its recent selection as the headquarters of the government of the whole of India will most probably result in a further development of its industry and commerce.

Kanauj had probably as great natural advantages as Delhi, at least in early days when the Ganges flowed close to the city, and nine centuries ago the two cities were of perhaps equal importance. but its decline has been so great that some students may not even know where to look for it on the map of India. Its decline dates from the Muhammadan conquest of the dynasty which had esta-

blished its capital there: the Muhammadans retained it as an administrative centre but did not establish a court, while changes in the course of the Ganges deprived the city of its former advantages, and, later, the great trade route established by the East Indian Railway passed at a distance from it. So to-day it is a small town, distinguished only by the extent of ruined buildings in its vicinity, and by some small handicrafts, especially scent-making, which have survived from the days when it was an important centre of industry.

Cawnpore has no ancient history, and in the eighteenth century was a mere village. Its importance arose with the increase of boat-traffic on the Ganges, as it was the highest point to which the larger boats could usually ascend, and early in the nineteenth century it was chosen as a cantonment. When trade was already established, the railways came, and the traders were quick to take advantage of them and extend their operations; and at the same time some factories were started, and their numbers have since increased, so that the city has become the chief commercial and industrial centre in Upper India.

Kalpi, lying on the south bank of the Jumna, has a much longer history than Cawnpore. It was an important fortress and administrative centre in Muslim times, and when through trade developed on the Jumna the town became one of the largest ports in India, because much of the cotton and grain produced in Central India was brought to the river at this point. As railways were constructed, the river lost its importance, and Kalpi sank into insignificance, though the trade has revived slightly since the construction of the railway from Cawnpore to Jhansi.

Murshidabad first rose into importance in the eighteenth century, when it became the seat of the government of

Bengal, being chosen probably because of the facilities for communication by river. Trade developed rapidly, and the city was described in the middle of that century as being as 'extensive, populous and rich as the city of London'. By the end of the century its importance was declining, the seat of government was transferred to Calcutta, the industries which had been supported by the court diminished greatly, and trade became of little importance, so that the population is now only about one-tenth of what it was a century ago.

Calcutta too has a short history. Its foundation dates from the days when the overseas trade with Europe was being established, it was chosen as the centre of this trade because it lay at the highest point on the river to which sea-going ships could be brought, it grew with the growth of this trade, and its importance as a trade-centre led to its being chosen as the seat of government. Large factories came later, and now in industry and commerce alike the city is rivalled only by Bombay in the whole of India.

The history of these and other cities and towns of Northern India indicates that the first condition for their establishment is the possession of some advantages in the way of communications, which in the past meant nearness to a navigable river. When population began to collect at such a place, its selection as the site of a court or centre of administration so enlarged the market for food, clothes and other desirable things as to attract many more inhabitants, while the departure of the court involved a corresponding decline. In modern times railways tend to do the work which was formerly done by rivers, and the new cities that are now growing up will usually be found at suitable points on the railways rather than on the river.

banks. In the old days when industries were mainly carried on by artisans working independently, their extent varied rapidly with the size of the market; artisans followed the court, partly because of the market which it offered, and partly because of the security which they enjoyed in its neighbourhood; and when the court left a city, many of the artisans left it too. Here too the conditions have changed: large factories with expensive buildings and heavy machinery cannot be moved about; it is now more difficult to establish industries in a new centre, but, on the other hand, industries when once established are not likely to suffer from political changes such as the movement of a capital. They must as a rule be established in places where labourers can be had, that is, in or near an existing town; but when they are at work the population will stay near them so as to retain its employment, and will not as in the past go elsewhere. The chances are, therefore, that the modern town with a large part of the population employed in industries of the modern type will be more stable than if it depended for its existence, as the older towns did, on the caprice of a king or governor.

But it would be a mistake to think that facilities for communication and other natural advantages will alone ensure the establishment of a town in a particular place. There are plenty of places on the Ganges and the Jumna where no town is known to have existed; and there are plenty of places on the railways which show no signs of growth or development. Very much has depended, and still depends, on the appearance of individuals with the qualities which fit them for the establishment of a new trade or of new industries. This subject—the appearance of the trader and the manufacturer—will occupy the student's attention at a later period of his course, but it

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must be mentioned here as one of the causes that lead to the growth of towns, because it is very largely the existence of trade and industry that makes people want land in a particular position, and thus leads to the keen competition for every small piece of land that is the chief characteristic of town-life as we know it.

CHAPTER VII.

AGRICULTURAL LAND.

WE have seen in the last chapter that the trader, the artisan and the manufacturer alike cannot be satisfied by any land that may be available, they want it in a situation where they can carry on their business to the best advantage. This is equally true of the agriculturist, but in his case the quality of the land is also of great importance, whereas the townsman is usually satisfied as regards quality if he can get good water and keep his land drained. Situation then is much the most important point in towns, but in the country both situation and quality are important.

One reason why the cultivator is concerned with the situation of his land is that he wants to be near a market where he can sell some of his produce. A man who has land close to a large city will grow fruit and vegetables which he can sell for very much more than wheat or maize grown on the same land would bring; out in the country there is no market for such products, and he will not grow them. Hence there is very keen competition for agricultural land close to large cities, and people will pay for an acre of it perhaps ten times as much rent as if the land lay at a distance. But even in a village at a distance from any town the situation is often a most important question. Some fields can be irrigated from a canal or lake or river,

and they are naturally more sought after than fields with no supply of water. Fields close to the village-houses again are much easier to manure than fields at a distance, and in addition they usually get enriched by the deposit of filth; they are therefore much more suitable for cultivation than fields at a distance, and consequently people will pay much higher rent for them.

But to the cultivator situation, though important, is not everything. The land must be fit for cultivation or he will not take it at all, and his eagerness for it increases with its natural fertility. Much of the surface of India is unfit for cultivation in the hills and mountains large areas either consist of rock or are so steep that crops cannot be grown on them; and in the plains there is much land that cannot be cultivated either because it consists of excessively stiff clay or because it is loose, shifting sand. The landholder knows he can get no one to pay rent for land of this kind. For the rest of the land he hopes to find tenants, but even in one locality the amount of rent which tenants will pay varies greatly according to what is called Fertility. A study of Agricultural Science is necessary to understand fully the meaning of this word; and the student must be content to know that the amount of grain that the cultivator can produce depends very largely on the nature of the soil he has to work. Some soils are deficient in particular substances which plants require for their growth, while others are adequately supplied. Some soils again readily supply a plant with all the water it needs, while others have often an insufficient supply, and it is such differences as these that in the aggregate make one piece of land more, or less, fertile than another.

If we watch the cultivators of a village at their work

we shall find that a sort of standard of work is recognised by them as appropriate for the different crops grown on land of about the same fertility. By a 'standard' we do not mean that every cultivator gives just the same amount of work; some will give rather more, and some less; but the general view of the cultivators will indicate clearly the amount of work that is considered profitable in ordinary circumstances. Thus, we may find localities where about eight ploughings are considered proper for wheat, while two or three will be enough for barley, and perhaps twenty will be required for sugarcane. In such a locality a cultivator will say confidently that for wheat eight ploughings will give more produce than four, and will also pay him better. If he is asked whether twelve ploughings will give more produce than eight, he will probably assent; but he will not assent to the suggestion that twelve ploughings would pay him better. Now these traditional standards are the result of experience gained during many generations, and they lead up to one of the most important laws of Agricultural Science, which is known as the Law of Diminishing Returns. This law belongs primarily to Agricultural Science, but it is not less important in the study of Economics, and students must take some pains to understand exactly what it means, although without a knowledge of agriculture they cannot realise the mass of evidence on which it is based.

As we have seen, cultivators have learned by the experience of many generations that it does not pay to do more than a certain amount of work for any given crop grown on land of a particular quality. more work may result in larger produce, but the additional produce will not pay for the additional work. In the same way they have learned by experience that there is a limit to profitable irrigation,

to profitable manuring, to profitable weeding, and so on; more produce can be obtained by carrying these operations further, but there is in every case a point where the additional produce no longer pays for the extra cost. This point may be made clear by an illustration. Suppose that cultivators of a particular piece of land find they get fifteen maunds of wheat from an acre when they have ploughed eight times and irrigated three times. A particular cultivator now ploughs sixteen times, and finds that he gets sixteen maunds of wheat as the result. That is to say, eight additional ploughings have secured one additional maund of wheat; does this pay him? It does pay him if he can get one ploughing done for less than five sers of wheat, because then the additional eight ploughings have cost less than 5×8 , or 40 sers; but if a ploughing costs more than five sers, he will have spent more than he has gained. So if a fourth irrigation yields an extra maund, it will pay him if the irrigation costs less than a maund, but not otherwise. It is calculations of this sort that lie at the base of the standard practices to be found over the country, cultivators have learned that, taking one season with another, it does not pay them to do more than a certain amount of work, because they have come to the point where the extra produce would not pay for the extra work. It is probably not the case that cultivators all over India carry their work up to this limit. In places where there is not much competition for land they probably stop short of the limit and might increase their income by working harder; but in the closely-populated plains of Northern India it is probable that on the whole cultivators do as much work as will pay them, though everywhere there are lazy and careless men who could get a larger income by working harder.

This same fact, the existence of a limit to the amount of work that can be done profitably, appears clearly in another way. When a cultivator is in a position to do more work, or to spend more on irrigation and manuring, he does his best to get more land to cultivate, rather than increase his work and his expenditure on the land which he already has. If he could go on indefinitely securing a proportionate increase in the produce of his land by giving more work and spending more money, then he would be content with the land he has, and would not be willing to pay rent for additional fields; but in fact, he begins to look for additional fields as soon as he finds that he has work or expenditure to spare, and he does so because he knows that he has reached the limit, and that his land will not pay for more than it is getting already.

The Law of Diminishing Return is thus stated by Marshall: "An increase in the capital and labour applied in the cultivation of land causes in general a less than proportionate increase in the amount of produce raised, unless it happens to coincide with an improvement in the arts of agriculture"¹ As this is the first important Law which we have to consider, students should turn back at this point to what was said in Chapter I regarding the nature of a Law. A Law is simply a conclusion drawn from experience, and we have indicated above the kind of experience on which this law is founded. If the increase in produce were proportionate to the increase in expenditure, then there would be no limit to expenditure on any given piece of land; a man might go on spending more and more, and each successive item of expenditure would pay him as well as those that had gone before. But the increase is less than proportionate to the expenditure, and thus the

¹ *Principles of Economics*, IV III 1.

cultivator sooner or later finds that a limit exists and that further expenditure will not pay him.

In the law as above stated, there are two qualifications. The first is contained in the words *in general*. These words, or an equivalent phrase, will be found in many of the laws of Economics, and indicate that exceptions must be expected in particular cases; this is in accordance with experience in every-day life where as we know the unexpected sometimes happens. The exceptions to the Law are sometimes of great interest and may require study at a later stage, but for the present it is enough that students should realise that while the Law is generally true, it is not necessarily true of every single cultivator or of every single field.

The second qualification has the effect of limiting the application of the law to a period during which the art of agriculture does not change materially. This limitation is necessary, because a considerable change in the art may alter the whole relation between expenditure and produce, and either make it advantageous to spend much more, or make it unadvisable to spend so much. But when the change has taken place, the Law still holds good: the amount of profitable expenditure has changed, but it is still true that there is a limit beyond which further expenditure is unprofitable.¹

¹ Some knowledge of the science and practice of agriculture is required in order to appreciate this qualification. It is quite possible, for instance, that the introduction of improved tillage-implements in northern India might entirely alter the existing standards of cultivation. Four ploughings with improved implements might give the same produce as eight ploughings done in the style that prevails at present, and it might then be found profitable to till the land more thoroughly, giving say six ploughings in all. The amount of profitable expenditure would then be changed, but there would still be a limit; it might be found profitable to plough six times, while eight ploughings would not pay for the extra work or cost.

Subject to these qualifications, the Law is supported by the experience of cultivators in India, as well as by that of the English and French farmers from whose practice it was originally deduced. It is the most important conclusion of Economics regarding agricultural land; we have not occasion to use it at once, but it lies at the foundation of the theory of Rent which will occupy us at a later stage.

CHAPTER VIII.

LABOUR

THE second Factor of Production is usually spoken of as Labour. This term includes all the work done by human beings,¹ but excludes the work done by animals. Sometimes the word is used to denote the work itself, while sometimes it is used to denote the labourers who do the work, and it is best that students should always bear both meanings of the word in mind, because we cannot as a matter of fact separate the worker from the work.

The work done by human beings is of very different kinds; it is done partly by using the muscles of the body and partly by using the intellect, but it cannot be distinctly classified on this basis because a great many people use both intellect and muscles, and the work which they do is the result of both. On one side we have the ordinary general labourer or coolie, who has very little need to use his intellect, and practically all of whose work is done by his muscles, on the other hand, we have merchants

¹ All the work done by human beings is not productive of wealth, and some writers on the subject have drawn an elaborate distinction between productive and unproductive labour. The distinction must of course turn on the exact meaning given to the word Wealth, and its discussion deals mainly with things that are on the borderline, in accordance with what has been said in Chapter IV, we leave this distinction for study at a later stage.

and professional men such as pleaders, whose work is done by the intellect and who practically never use their muscles in production. Between these extremes we have all the people who use muscles and intellect in varying proportions, the cultivators, the artisans, and the skilled labourers, as well as people like copyists whose work is mainly done by the hands. It is convenient to begin the study of Labour with the men who work wholly or mainly with their muscles, and we shall take as the simplest case the labourer who works for hire and uses his muscles to do the work that he is ordered to do.

The hired labourer is a familiar object both in the town and in the country, and the first question regarding him is, Why does he work? It is because he wants wages to buy food and clothes for himself and his family; that is, his object in working is to obtain some wealth, by consuming which he will satisfy his wants. It is true that a man gets a certain amount of pleasure from using his muscles; this is one reason why we play games like hockey or cricket; and men may be found, though they are probably rarer in India than in Europe, who will do for pleasure a certain amount of ordinary coolies' work, such as digging in the garden, cutting down trees, or sawing wood. And even the ordinary coolie feels some pleasure in doing his work well and skilfully, just as we take pleasure in a well-timed hit in cricket or a good shot at the goal in hockey or football. But the fact remains that the ordinary labourer does not work for the pleasure of the exertion, even though he may get some pleasure out of it; he is not found working for his own pleasure on days when he has been unable to get employment for wages. Work is on the whole unpleasant to the ordinary man, he will not go on working for nothing, and he has to be persuaded to work by offering

enough wages to induce him to work. The amount of wages that has to be offered is a matter which we shall have to examine at some length when we are discussing Distribution. For the present all we can say is that men will not work for nothing, and that if we want men to work we must offer them some inducement.

This fact is as true of the cultivator or artisan as of the hired labourer, he will not work without some inducement to do so. In his case the inducement is not offered in the shape of a payment for a day's work, but it is part of the wealth which he produces. The cultivator realises that if he sits idle when he ought to be ploughing or irrigating, he will have less produce at the next harvest some months hence, and he works to-day in the hope of securing that distant reward. He thus looks further into the future than the ordinary coolie who expects his wages to be paid at the end of the day, or at latest at the end of the month, and it is probably true that the ordinary cultivator works harder than the ordinary coolie. The artisan again knows that if he sits idle he will have less to sell in the future, and he works because he looks forward to the price to be paid for his wares when they are finished; part of that price will be spent on food and other things to satisfy the wants of himself and his family. So that though the form of the inducement differs in different cases, this fact is true of all classes who use their muscles to produce wealth. They would not do the work merely for pleasure. The work is in itself unpleasant, but they do it because it enables them to satisfy some of their wants.

Now, if we suppose that the supply of the other Factors of Production remains unchanged, we may infer for the moment that the amount of wealth produced in a given area will vary with the number of labourers, that is, that

most wealth will be produced where there are most labourers engaged in producing it. This inference must, however, be modified in cases where there are great differences in the quality of the labour, because a small number of highly skilled men, all working their hardest, may produce more wealth than a larger number of lazy and unskilful men and thus, in considering labour as a factor of production we have to examine both the question of numbers, and the question of quality of the labourers. We will take the numbers first, that is, the population of the country, since the largest part of the population lives by manual labour.

The size of the population at any given time is the result of various influences · these may be considered as affecting (1) the birth-rate, (2) the death-rate, (3) emigration. The birth-rate means the number of children born annually among a fixed number of people · it is obvious that if forty children are born in a year among a thousand people in one country, and only twenty among a thousand in another country, the population of the first is likely to increase more rapidly than that of the second. The causes that influence the birth-rate are by no means fully known, and their study is not a part of Economics but belongs more properly to the science of public health ; it is enough for the student to know that the differences may be very large.

Similar considerations apply to the death-rate If in one country forty people die in a year out of a thousand, and in another only twenty die, it is obvious that the latter will increase more rapidly in population than the former, or if (as is quite possible) both are decreasing, the former will decrease more rapidly than the latter.

The third influence, migration, takes into account the fact of some people leaving the country and other people

coming to it. In India as a whole it is of little importance, but it affects some parts of the country, and in some other countries where special conditions exist it may lead to very material changes in the numbers of the population. Thus, countries like Canada and Australia are at the present time gaining greatly in population by the large number of *immigrants* (that is, persons coming to live in the country), while recently some European countries, and notably Ireland, have had their population reduced by *emigration* (that is, by people leaving them to live in other countries).

While the causes of high or low death-rates and birth-rates lie for the most part outside the scope of economic science, the causes of migration usually lie within it, because when people change their country in large numbers, their object usually is to obtain an opportunity of acquiring more wealth. Other causes it is true have influenced migration in the past, and students of history will remember that it was a religious cause that first brought the Parsees to Bombay, just as it was a religious cause that brought the Huguenots to England. But at the present day large numbers of people do not often change their country from such causes as these. People go to countries like Canada because they can earn higher wages or get possession of land more cheaply than in some parts of Europe, just as some coolies from the south of India go to Ceylon and Burma because they can get higher wages there than at home. The facts of migration and its causes are of very great interest to the economist; something is said about them in the next chapter, but they will require further detailed study at a later stage.

While recognising that the main causes influencing population, that is, the causes of high or low birth-rates and death-rates, lie beyond the scope of the science, econo-

mists have tried to state the experience of history as to the growth of population in the form of a Law, or Laws ; and one of these attempts, made by the economist Malthus, has had so much influence on later writers that students should make themselves acquainted with it, though they can hardly appreciate its importance at this early stage. Malthus concluded from his study of history that the increase of population in any country tends to be rapid and continuous ; and that, unless the population is kept down by some special cause, it tends to increase until there is a scarcity of food and of the other necessities of life , and this conclusion is sometimes stated in the form of a Law, to the effect that Population tends to increase up to the limit of subsistence

The full discussion of this Law would involve an extended study of the history of the world, and at the present stage students must be content with understanding what it means. In any country, it suggests, the numbers of the people will ordinarily increase. The numbers may be kept down or reduced by special causes . large numbers of men may be killed in war or die during a famine, or plague or cholera or some other disease may cause many deaths : but if no such special causes occur to reduce the numbers, a time must come when the population will be so large as to require all the food and other necessities that the country can produce , and when this point has been reached a further increase in population will result in an inadequate supply of necessities

It is not very easy to think out the application of a Law like this for so large a country as India, and its meaning will be more easily grasped if we take the case of an ordinary Indian village and see what is likely to happen there. Let us suppose that a village has sufficient population to culti-

vate the land belonging to it, and that the people belong to castes which do not engage in industries other than agriculture, and let us suppose too that all the produce of the land is consumed in the village. Now what will happen if the population increases? There are now more people to be fed, and the land must therefore be more highly cultivated in order to raise more food than it has hitherto yielded. But as we have seen in the last chapter the land yields a Diminishing Return to high cultivation, and the conclusion seems inevitable that a point must be reached when it will not yield sufficient food for the increased population, there will be more food on the whole, but there will not be so much food for each individual. As things are at present, epidemics of cholera or plague must be expected from time to time, and these will keep down the population, but such epidemics are entirely preventable, and everyone must hope that, with the progress of sanitation, they will in time disappear from India as they have disappeared from most of the countries of Europe.

What happens now in an overcrowded village such as we have described? Some of the inhabitants leave it to take service elsewhere—men of the higher castes go as sepoys or peons, while the low castes go to work in factories, or on railways, or in the coal-mines. But if we suppose all the villages and towns of the country to be overcrowded, then the inhabitants of our village will not have this resource because they will not be wanted elsewhere, and they must stay in their village where there is not enough food for them. Either then the population will decline as the result of deaths from insufficient food, or the inhabitants will limit the population in some way or other, so that it shall not exceed the number that can be fed. History

tells us that some communities have in fact found ways of limiting the population. the old people have been killed or left to die when they could no longer work, while the practice of killing off some of the young children was not long ago common in various parts of India, and special laws for the prevention of infanticide are still in existence. But measures such as these are no longer permitted by civilised governments; and the only permissible means of limiting the population is the exercise of self-restraint on the part of the adult men and women, so that fewer children shall be born.

This was the state of things to which Malthus looked forward,¹ a time when the people should so limit the number of births that the population should not increase up to the limits of subsistence, that is to say, instead of

¹ At the time when Malthus wrote, the world was very different from what it is now, and it was impossible for him to foresee that food and other necessities would be transported in enormous quantities by railways and steamships from one side of the world to the other. He wrote, therefore, on the assumption, which was true at the time, that each country must produce most of the food which it required for consumption. This is no longer true. a country can now get all the food it needs by purchase from other countries, provided that it produces enough wealth in other forms to pay for the food which it buys. England, for instance, produces much less food than it consumes; it pays for it mainly by the goods which it manufactures. But if England had no coal or other fuel to enable it to manufacture goods in sufficient quantities to pay for its food, its population could no longer be maintained as at present, it would have to devote itself to raising more food from the land than is now raised, and if it could not raise enough food to support itself, the population would be reduced by emigration. The question is no longer one of raising sufficient food to support the population of a particular country, but of producing sufficient wealth to provide by purchase the food that is required. In country like most of India, where agriculture is the chief means of production, the amount of food produced is still a matter of great importance; but even in such cases it is conceivable that a community might find it profitable to produce such things as cotton and oilseeds, and buy its food with part of the money obtained for the sale of these.

a large number of persons struggling for a life of poverty and insufficient food, there should be a smaller number able to obtain sufficient quantities of food and other necessities and to lead a life of comfort. There are many other considerations affecting this question, which will engage the attention of students at a later stage: for the present we may leave the subject with the remark that though particular parts of India are certainly overcrowded in this sense, India as a whole is not, and that the problems before Indian statesmen of to-day refer not to limiting the numbers of the people but to facilitating their more even distribution over the country, and to increasing the production of wealth, partly by the improvement of agriculture and partly by the development of those industries, for which the country offers a wide scope, and which would afford employment and subsistence to what now seems its surplus population.

CHAPTER IX.

MOBILITY OF LABOUR.

As has been indicated in the last chapter, labourers are not evenly distributed over India there are overcrowded towns and villages, and there are villages and towns which could employ a larger number of productive labourers than they possess. In a general way the distribution of the population follows the fertility of the soil, thus the population is dense over most of the fertile plains that lie along the Ganges, while it is very small relatively to the total area in the Himalayas, and also in the hilly tracts of Central India. The usual way of stating the density of the population is to calculate the average number of persons to a square mile; and the census shows that this figure may vary in the case of Indian districts from less than thirty to close on one thousand persons. The density, as we have said, tends to vary with the fertility, but this tendency is by no means always realised, and the differences that exist do not rapidly become equalised. Nor does the surplus population of the over-crowded tracts migrate at once to places where the establishment of new industries offers better chances of employment: such migration as takes place is usually slow and partial. Thus the factories in cities like Calcutta or Bombay or Cawnpore may want many more labourers than they can get, at times when many labourers in Bihar and the United Provinces can

scarcely get enough work to support their families: in some places labourers cannot be got even at high wages, while in others there are labourers to spare. It is obvious that in these circumstances the production of wealth is less than it would be if the labourers were distributed in accordance with the needs of employers.

In former times some of the governments in India, as well as private persons of influence, attempted to deal with this situation by forcing labourers to go where they were needed; forced labour is still a memory among the country-people, and it might possibly be found in existence in some native states even at the present time. But under the British Government of India, the personal freedom of each individual labourer is maintained as far as possible, and though landholders may still be found forcing unwilling labourers to work in their villages, it is now impossible to move by force any considerable number of men in order to make them work at a distance; employers are left to effect such movements as they may require by the offer of higher wages and other inducements.

Some of the earlier European writers on Economics assumed the existence of what may be called complete Mobility of Labour; they assumed, that is, that labourers would go to work wherever the inducements were greatest, almost as certainly as water will flow downhill until it reaches the lowest possible level. Such perfect Mobility probably does not exist in any country in the world, and a considerable portion of later works is often devoted to the study of the hindrances to mobility that in fact exist. These hindrances differ in force from country to country, and from century to century, but their general nature is fairly uniform, and their study may be approached by a glance at the existing position in northern India.

In the first place we must distinguish between permanent and temporary migration. A labourer may either change his home permanently and settle in the place where he has found employment, or he may go away to work for a time only, intending to return to his home after a longer or shorter interval. Permanent migration is common in many parts of the world, and most of the emigration that takes place to countries like Canada and Australia is of this type; but it is very rare in India. A good example of permanent migration is found in the Bengali families that have come to Upper India and made their homes in Benares, Allahabad and some other cities, and there are numerous other examples, but the number of people who migrate permanently is small relatively to the total population. Temporary migration is much more common men go out to service, or to work on railways or in mines or factories, usually leaving their families at home, and sending them money for their support, and such men usually return to their homes after a longer or shorter period. |

In India at the present time mobility is very largely a question of caste and locality. Men of some castes will go from some localities to work almost anywhere in India, and in their case the degree of temporary mobility is almost as great as is to be found anywhere in the world. Thus chamars from Jaunpur and Azamgarh are found working as grooms in almost every town brahmans and ohhatris of Oudh go to the most distant parts of India to work as sepoys and peons, and there are many other instances of the same kind. On the other hand, the bulk of the cultivating castes and of the field-labourers are very slow to move, and if they are driven to leave their village they go as short a distance as possible. Artisans are much more mobile than cultivators; as we have seen in a previous

chapter, many of these classes followed the royal courts in their movements over the country, and numbers of them will still go from one town to another if they think it will pay them to do so.

Thus, Mobility of Labour exists to some extent in northern India, and the question arises, why is it that when some castes in some localities are exceedingly mobile, the men of most castes are exceedingly difficult to move? The full answer to this must be sought for in the history of the country, and much of that history has not yet been written, so that no final conclusions can be drawn, but the information that is available seems to indicate that the ordinary inhabitant of northern India is by nature slow to move: that the cases of mobility are exceptional and consequently that employers who wish to increase their supply of labour should study these exceptional cases, and try to find out the causes that have led to them, and then try if they can set similar causes at work.

In studying this question, it must be remembered that most of the population obtains its income by working on the land. The cultivator differs from the artisan in one very important point he cannot carry his means of production with him. An artisan with his bundle of tools and a little money can move to even a distant town and start work there with little trouble, but the cultivator's success depends on his close and detailed knowledge of the peculiarities of each particular field of his holding, and when he goes to another holding he has to leave behind him all this detailed knowledge and set to work to acquire similar knowledge regarding his new fields, while if he goes to any great distance he has to learn all about a strange climate and strange soils and to grow different crops from those to which he is accustomed. It is true, therefore, of most

countries that the cultivator is slow to move, and it is particularly true of the Indian cultivator ; and since cultivators form the most numerous class of the population, their habits of thought influence the other classes living in the villages, and the ordinary villager does not think of leaving his home, and leaves it only when he is either forced to do so, or is tempted by some special inducement to go somewhere else.

The pressure that forces people to leave their village may be either social or economic. A man may have to leave his village if he gets himself disliked by the landholder or by his brotherhood, and particularly if he has been guilty of some discreditable conduct. In such cases the pressure may be called social. It may work in different ways : perhaps the landholder may turn a man out of the village, or perhaps when he has quarrelled with his brotherhood he may find his life so uncomfortable that he decides to go elsewhere ; and in either case he is likely to go to some town where he hopes to find friends. Probably this social pressure is not of great importance from the economic point of view ; that is to say, it does not send very large numbers of people away from their villages to work in other places ; but it accounts in part for the number of bad characters who are to be found in large cities like Cawnpore.

When we speak of economic pressure, we mean simply that a man finds he can no longer make a living in his village. This cause too is *by itself* probably of little importance in causing labourers to go where they can be of more use ; the men who cannot make a living in their village are usually worse workers than the rest, and would not be of great use anywhere, while their ignorance of where to go and their fear of going to a strange place are likely to keep them in their village, doing such casual work as they can find, and looking for help to the charity of their more

prosperous neighbours But economic pressure, *when combined with special inducements to go elsewhere*, is of great importance, and this combination of influences does in fact cause many workers to move to places where they can earn more money Thus a young chattri of Oudh may find that there is not work for him on his father's land, and that his father's income is not large enough to support the family : this is economic pressure, and if it stood alone it might not cause him to go elsewhere But probably he has relations and friends in service in Calcutta, or Hyderabad, or Lahore, or some other distant city, who are earning money and sending some of it home to their relatives ; so he goes to some distant place where he has friends, and through their help gets employment, and presently he too is able to send home money to his family Or a weaver may find that he cannot support himself in his village, now that cloth can be bought so cheaply , he knows that some of his brotherhood are working in the cotton factories at Bombay or Ahmadabad, and he goes there and gets similar employment with their assistance¹ . . .

The general position then is that people are inclined to stay at home among their friends, and disinclined to go among strangers, while they are usually ignorant where to go : these conditions are not peculiar to India, and the

¹ A striking illustration may be found in the case of the Warora coal-mine near Nagpur In 1872 when the mine was about to be made, a man named Bhawanı Dın Dıkshit, who was employed on the railway near the works, offered to bring labourers from his home in Rai Bareli to dig the mine He persuaded a gang of men to come, and when they had dug the mine they found themselves well off, and stayed on as miners to dig the coal So long as the mine worked, there were always labourers from the same neighbourhood, men coming to a place where they knew their friends were doing well, and when the work of mining had become familiar, they went to other coal-mines also and considerable numbers of them may now be found working in the mines of Bengal

obstacles to mobility of labour all the world over may be summarised as disinclination and ignorance, though their extent and importance varies greatly in different countries. The amount of temporary migration has increased largely in India during recent years, and it will probably continue to increase until the supply of labourers is much more closely adapted to the needs of employers than is the case at present. One reason for this change is the increase of knowledge. People in the villages are becoming familiar with the fact that more money can be earned elsewhere, and they are gradually getting to know the places where it can be earned; in other words, the obstacle of ignorance is weakening. A second and most important cause has been the extension of railways, which has made it possible for labourers to travel quickly and cheaply to distant places where they can get work. A weaver in Oudh, for instance, can get to Bombay in two days, and large numbers of weavers now make this journey for the sake of a few months' work. When there was no railway, the journey might have taken months, and would have cost very much more than it does now. This is only one of the many ways in which railways have added so greatly to the productive power of the country as a whole.

So far we have been considering one sort of mobility only, that is of people going to work in another place: but the term mobility covers also the idea of people changing their occupation. Suppose a man who is employed in making brass vessels finds that brass has become very dear, or that people will not pay fair prices, or that for any other reason he cannot make a living by his occupation. What is he to do? One course is, as we have seen, to go to some other town and start making brass vessels there another is to stay where he is and take up some other occupation.

Such a change of occupation is possible, and it is sometimes forced on people · but it is as a rule difficult in all countries, and in India it is rendered exceptionally difficult by the customs of caste. The brass-worker may see, for instance, that the leather-workers in his town are earning exceptionally high wages, but he cannot become a leather-worker. This would be difficult anywhere, because he would not possess the necessary skill in working leather, and (as we shall see later on) most occupations require a period of teaching and training · but in India he would not for a moment think of the change as even possible, because the rules of his caste would not allow of it. Thus, many of the occupations which require special skill are closed to all classes of the people except the single caste which follows them, and in this way the caste system, which at present is almost peculiar to India, makes it very difficult to increase the number of workers in the occupations where workers are most wanted. If a skilled labourer is forced to give up his own occupation, he can take up only one of the few kinds of occupation which are not confined to a single caste, usually either cultivation or what is called general labour, that is coolies' work.

We have said above that even when the system of caste does not exist, it is not easy for the worker to change his occupation. The course a man takes when he is free to choose is to put his sons into the occupation that seems to offer the best prospects. A mason, for instance, may either bring up his sons to be masons like himself, or he may get them trained for other occupations—one a metal-worker, another a shopkeeper, another a schoolmaster, and so on. In this way the choice made by parents tends in the long run to supply workers to the occupations where they are most wanted, because parents choose for their

sons those occupations where the wages and other inducements are most attractive. The adaptation is by no means perfect, because while the boys are being trained the conditions of production may change, and there may be much less need for their work when they have grown up than at the time the choice was made. Even in Europe, therefore, workers are not as a rule distributed just as they should be so as to secure the largest production of wealth, at any given time some occupations want more workers, while in others there are too many. In the first case some other factors of production are insufficiently employed for want of labour, and in the second some workers are insufficiently employed and have to waste part of their time in idleness. The want of adaptation between workers and work is probably greater in India than in European countries, because of the special hindrances of the caste-system; not only are workers unable to change their occupation, but they cannot choose occupations for their sons, who are equally bound by their caste. We shall see later on that this want of adaptation is of great importance in Distribution; at present we are concerned only with its influence on Production, where it is certainly harmful, causing an excess of workers in some occupations, while in others the want of workers is the chief limit to the quantity of wealth produced. The means of securing closer adaptation is therefore one of the large economic problems before the country. We cannot discuss it here, but students will have to pay serious attention to it later on.

Before leaving the subject, it is well to say that the caste-system is by no means an unmixed evil, even from the point of view of Production. We shall see in the next chapter that it is of considerable value in securing the training of workers and thus maintaining the quality of labour.

CHAPTER X.

QUALITY, OR EFFICIENCY, OF LABOUR.

So far we have been considering the quantity of labour, that is the number of workers available for productive purposes we have now to consider the other main factor, the quality of labour Common experience shows that there are very great differences among workers, so that employers choose one man instead of another, and sometimes one race or caste in preference to others who would be ready to do the same work these differences may be classed as arising from (1) health and strength, (2) skill, (3) moral qualities

We have seen that manual labour means primarily the use of the muscles of the body and it is obvious that men who are strong and healthy can do more work, and so aid in the production of more wealth, than those who are weak and sickly The quality of strength seems to depend partly on race and partly on training in childhood : it is difficult to separate these two conditions because the races that are strongest are usually those where the children lead a healthy and active life, and we cannot yet say with certainty how much of the strength is due to inheritance and how much to training But the existence of the difference is well known : Panjabi labourers, for instance, can do more work than men from Oudh, and Oudh men can do more

than Bengalis. But the maintenance of bodily strength requires also a sufficient supply of nourishing food, and a half-starved man can rarely do a full day's work · hence good and sufficient food is an important condition of Production.¹

But a man may be naturally strong and may be sufficiently fed, and may yet waste much of his working time if he suffers from fever or some other disease that keeps men away from work for prolonged periods. We have seen that improved sanitary conditions would be a material aid to Production, because they would lower the death-rate and thus leave a larger population at work at any given time but they would be even more valuable in India if they could secure a large reduction in the amount of sickness due to fever. We all know in a general way that a piece of work may be very much delayed because many of the labourers have fever, but it is only the employers of many labourers who can realise how great a hindrance this loss of time is to Production. Thus, the improvement of sanitation is most important from our present point of view, not only because it will keep more labourers alive, but because it will keep many more labourers in good health and fit for work

The next difference which we have to consider is in skill. Skill depends first of all on the muscular movements which constitute manual labour. Every student who has played games or done gymnastics knows that a movement of the muscles which at first he finds difficulty in performing

¹ This point will require further consideration in connection with Consumption and Distribution. In the meantime the statement in the text may be illustrated from the experience of famine-relief Labourers who come to relief-works are rarely able to do the full day's work of an ordinary man, and the task set to them as the condition of their receiving the daily wage has to be carefully graduated so that it shall be reasonable with regard to the physical condition of the workers.

becomes gradually easy with practice : at first he has to perform it slowly and painfully, and must think of nothing else , but gradually it becomes easier, and he can perform it more quickly and certainly, until at last he need scarcely think of it at all, but can go through a complicated series of movements almost automatically. An experienced batsman, for instance, has not to stop and think how he is to move his legs, his arms, his wrists and his shoulders in order to play a particular kind of ball . he recognises the kind of ball almost as soon as the bowler delivers it, and he makes the appropriate movements without thinking further , if he had to think them out, he would probably be bowled before he had finished thinking. The movements made by a labourer at work are exactly the same in kind as those made by a youth at play . he needs practice in them until he can perform them quickly and accurately without stopping to think about them, and people watching a skilled workman are apt to think that his work is quite easy because he seems to do it so easily. The work of a potter, for instance, looks exceedingly simple : he spins his wheel, throws a lump of clay on it, presses the lump for a few seconds with his hands, touches it with a knife, and then, as the wheel comes to rest, takes off the jar or cup which he has made and puts it with others to be baked. But if a spectator offered to take the potter's place, he would soon find himself in difficulties , it takes skill even to spin the wheel at the proper pace, the lump of clay will fly off if it is not thrown exactly in the centre of the wheel, and an unskilful touch will either knock the clay to pieces or produce a shape quite unlike what is intended. The same thing is true of all manual labour the muscles concerned must be practised until the required movements become a habit

The chief value of the caste-system from the point of view of Production is that it gives this practice while the future workers are still boys. The potter's son has watched his father at work from the time he could walk ; he looks forward to doing the same work all his life, and when he begins to try it his father is beside him, showing him exactly how to make the necessary movements. The same object, training and practice in the required movements, is, in some other countries, secured in part by what is known as the apprenticeship system, under which a boy is placed under the orders of a workman to learn his occupation ; but the ordinary workman cannot be relied on to take as much trouble over training an apprentice as the father takes with his children ; and probably this kind of skill is at least as common in India as anywhere else in the world, just because of the careful training which the workmen have received from their fathers while they were children

This control over certain movements of the muscles, acquired by long practice, is the foundation of all manual skill. The higher kinds of skill consist partly in control over a larger number of movements, and partly in the exercise of judgment (also acquired by practice and experience), which enables a man to decide at once what particular movements are most suitable to the material on which he is working and to the object of his work. Thus, the ordinary potter is practised only in the movements required to make a few common objects such as cups and jars, and if he is given a pattern of some unfamiliar shape he will make many mistakes at first, and it will be some time before he can copy the pattern correctly. A more highly skilled potter knows how to make many more objects, and with his wider experience he can copy a new pattern more quickly, and with fewer mistakes. An ordinary potter

again knows only the movements required for the clay with which he has always worked, and if he goes away to a place where the clay is rather different it will be some time before he can work with it. The more highly skilled potter will have a much greater experience of different sorts of clay, and as soon as he recognises any particular clay he will know what to do with it. So again, he will know much more about colouring matters and how to use them, and can produce cups or jars of the colour he wants, red, or blue, or green, while the common potter can only produce the ordinary red to which he is accustomed.

Up to a certain point, the caste-system secures this higher skill, because the father teaches his sons all that he himself knows, and so knowledge once acquired is passed on to the next generation. The defect of the system is that it gives little scope for acquiring increased skill: the father cannot teach more than he knows, and the son learns only from his father. Now at the present time there is in India need for higher skill in almost all the work that is done in the country. This need is caused by the progress of the people generally in wealth and in knowledge. People want a larger variety of things, and they want things which their fathers did not know of, and at the same time new materials are available, and also new tools. The artisan should be able to use these new materials and new tools so as to produce the new things that are wanted. But he learns only from his father, and his father knows nothing about these things. So the artisan often goes on making what his father made, while the people buy things made in other countries, and have less money to spend on what is produced in their own town. It is thus the artisans as a class who suffer for their own ignorance. The remedy for this evil has to be sought in some scheme of industrial

training, which shall enable the young artisan to work with new materials, new tools, and new designs as well as his father works with the old, and the industrial schools which are now being opened in some cities are attempting to work out schemes of the kind, so that the next generation of artisans shall be at least as able to meet the new needs as the last generation was to meet the old requirements.

The foregoing illustrations of the meaning of skill have been drawn from the work of artisans, but precisely the same considerations apply in the case of agriculture. Skill, that is to say practice and a certain amount of knowledge, is required by the man who drives a plough or a cart, or who sows, or reaps, or irrigates, or weeds, and this skill is acquired in a very high degree by the cultivator's children as they help their father and learn from him. But the art of agriculture has to move with the times, just as handicrafts must move: new crops have to be grown, and old crops given up; new methods, new tools, and new implements are required in order to secure the greatest possible production from the land; and the cultivator cannot teach his sons about these things, which he does not know himself. And so arises the need for some kind of education which shall teach the cultivators' children the new knowledge they require without interfering with the training they receive from their fathers. Thus, in both the main branches of production, the question of increasing skill is at the present day a question of finding some means of enabling the young to employ the new methods, without sacrificing the practical training provided by the existing institutions of the country.

By the term Moral Qualities is meant such qualities as honesty, regularity, diligence, and the like, which are of much importance from the point of view of Production

A labourer may work hard and steadily without being constantly watched, and he will obviously do much more work in a given time than another who works slowly and lazily, and lays down his tools directly his employer's back is turned. Some workers again can be trusted with valuable materials, such as gold or silver, while others must be watched closely all the time, or they will steal some of the materials for their own use. The science of Economics cannot indicate all the conditions under which such qualities as diligence and honesty may be expected. Some of the most important conditions must be looked for in the past history of the people, in the training which they give to their children, and in the views of religion and morals that are current among them. But there is one economic tendency of great importance that must be considered in this connection. It is concerned with the effect of the reward offered on the quality of the work done.

We know that we can usually get a man to do better work if we offer him, in addition to his ordinary wage, a small extra payment depending on the quality of work he does, and the extra value of the work may be worth considerably more to us than the amount of the extra payment. This is the simplest case of the tendency we are considering, men will do better work for a higher payment, and an employer can, within certain limits, increase materially the production of wealth by raising the wages which he pays. But the limits to this increase are of great practical importance, as we know, the muscles get tired when used for long, and the whole body gets tired too; and when a man goes on working with tired muscles and a tired body, the movements which he has to perform are not made with the proper speed and precision, and the work is badly done, just as a good bowler cannot bowl

well when he is tired. The reward offered should, therefore, be sufficient to make men do their best work without over-working themselves : and it is one of the employer's most difficult functions to adjust the reward accurately so as to meet this condition.

The tendency which we are considering thus applies to hired labourers only within certain limits : its influence is much greater in the case of artisans or cultivators, who are their own masters, and receive all the additional wealth which they produce by working better. It is found as a matter of experience that these classes, taken as a whole, maintain a higher standard of work than hired labourers ; but to ensure this result it is essential that they should have confidence in being able to keep what they have earned. The artisan will not work his best if he knows that his earnings are liable to be carried off by robbers, or by the officials of an arbitrary government, and the cultivator will not work his best if he knows that all his extra profits are to be taken from him by a landholder, whether as rent or otherwise. We thus come to the large subjects of the advantages of efficient government, and of equitable Tenancy laws, questions which students will have to consider later in their course, for the present all that can be said is that these institutions have a most important influence on the quality of the work done by most of the producers of the country.

Economists usually speak of the quality of labour as *efficiency*. By this word they mean that the wealth produced by a certain amount of labour is large relatively to the cost of the labour expended, and it is the object of every employer to secure the maximum efficiency of the labour for which he pays : he has to offer such wages and other inducements as will ensure that the labourers work their

best, that they do not waste their materials, and that they do not spoil the tools and other appliances which he supplies. He has to think too of the conditions under which the work is done, because men cannot do their best work in badly-lit or badly-ventilated rooms he has to think of the sanitary conditions of his workshops, in order to secure the health of his workers and in many cases it is his interest to spend money in training children so that they may become efficient workers later on The management of labour is thus one of the most important functions of the employer.

All text-books on Economics deal at length with a subject termed Division of Labour Logically it should be considered at this point of the study, but some knowledge of the meaning of Capital is required for a proper understanding of the subject, and we shall postpone its discussion for the present, and pass on to the higher branches of Labour which we may call intellectual work

CHAPTER XI.

INTELLECTUAL WORK.

IN Chapter VIII. we pointed out that the work done by human beings is done partly by using the muscles and partly by using the intellect. We have described some of the most important conditions affecting the amount and the quality of manual labour, and we have now to see how far those conditions exist also in connection with intellectual work

The classes of the people with whom we are now mainly concerned are government servants, members of the learned professions, merchants, and employers of labour. The feature common to the work done by all these classes is that it is done mainly by the intellect, and that there is little need in it for using the muscles. In India at the present time popular opinion would not class all these workers together; the government servant, for instance, is still regarded as something altogether superior to the merchant; but from the economic point of view both fall into the same group, because they do work of the same kind.

We have seen that since most of the population of the country supports itself by manual labour, the number of labourers depends mainly on the number of the population. This consideration obviously cannot apply to intellectual

workers, who form only a small proportion of the whole. The number of these workers depends mainly on the state of development which a nation has reached. a backward nation with little trade has room for a comparatively small number, and the proportion rises with the increase of commerce, industry, and learning. Apart from this fact we shall find that, speaking generally, the same kind of considerations apply to intellectual work and to manual labour.

As regards mobility, intellectual workers are, in the present condition of India, more free to move than manual workers. A pleader or merchant can move his business from one town to another at least as easily as an artisan, and he is rather more likely to do so, because his wider knowledge will show him where the best opportunities for working are to be found. But even a pleader or merchant is by no means entirely free. Like other men he would prefer to stay where his family lives and if he goes to a distance he sacrifices what we have spoken of as his practice or his good-will, and has to make a fresh start among strangers. The employer of labour is, in addition, often hampered by the fact that he owns buildings or machinery, which it would be difficult or impossible to move. Mobility from place to place is therefore by no means perfect among the classes which we are considering, while change of occupation (the other kind of mobility) is rendered very difficult by the amount of special training required by most of the professions. A pleader, for instance, may become a government servant or a merchant, but unless he takes a long course of study, he cannot set up as a doctor or an engineer. In these occupations special training is so important that the numbers of people engaged in them are determined very largely by the choice made by youths or

by their parents. A youth decides (or his parents decide for him) that he will be a pleader or a doctor, for instance; and if he succeeds in qualifying for the profession which he has chosen, he then chooses the town where he will start practice. This latter choice is determined partly by the room that exists for more pleaders or doctors in the various towns of which he has knowledge, and partly by his relationship or connection with persons of influence who can help him at the start

The limits imposed by caste are less rigorous in this case than with manual labour. A pleader's sons need not necessarily be pleaders, but may be doctors, or merchants, or teachers, or government servants, and owing largely to this fact, the needs of different localities for the different sorts of intellectual work are met with a reasonable degree of certainty: but at the same time, habit and family tradition count for a great deal, and at the present day there is no doubt that the production of wealth in India is seriously hindered by the fact that so many of the best intellects of the country are devoted to a few of the professions, and that so few of them engage in production as employers of labour. And the fact must not be overlooked that in practice intellectual work is still confined almost entirely to a few of the higher castes the professions are in theory open to all, but the children of the lower castes rarely obtain enough education to enable them to think of a professional career, while existing social prejudices would make it very hard for them to attain success

Turning to the quality of intellectual workers, we find that efficiency depends on the same three groups of causes as in the case of manual labour. Where we look mostly for muscle in the labourer, we look for intellect in the brain-worker, and in neither case do we yet know with

certainty how to increase the supply in a nation or other community. In this case skill comes from training the intellect instead of training the muscles, and this training of the intellect is the main object of what we call general education. A youth's intellect is first exercised or practised by the study of languages, mathematics, the sciences, history, and so on, until its functions have developed, and he then, as a rule, has to pursue a further period of study in the art of the particular profession which he has chosen—in other words, he must go to a training college for pleaders, or doctors, or teachers, or must pass through a period of training in a merchant's office or a factory. Training for intellectual work is consequently, as a rule, a longer and more expensive process than training for manual labour, but in essence the two are alike.

The moral qualities, too, that affect efficiency are fundamentally the same in both cases, diligence, vigour, and honesty are just as necessary to the magistrate, or the pleader, or the merchant, as to the labourer or artisan; and the nature of the reward expected has again a strong influence on the conduct and efficiency of the worker. There are, however, marked differences of degree in the importance attached to work for itself, and the attitude of the workers in this respect may substantially affect production.

It is true of nearly every person in the world that he experiences some satisfaction in doing good work. This is one of the facts of human nature, and the science of Economics is not concerned with its cause, but only with its effect. The artisan or labourer feels this satisfaction when he has done a good piece of work—even a sweeper takes pride in doing his work well. The lowest classes of labourers do not perhaps think about this satisfaction,

but they feel it, and they are dissatisfied with work which falls below their standard; and when we consider the higher grades of intellectual work we find that the desire to maintain a high standard exercises a very strong influence over the workers, and that its existence has a material effect on the quality of the work done. This desire for excellence is probably strongest among the classes engaged in what are known as artistic pursuits, such as writers or painters or sculptors, and with them it may even be the chief motive for work, while the money they will earn, or even the fame they will secure, enters little into their thoughts. Doctors again will often be found to treat a pauper who can pay no fees with the same care and diligence that they would give to the case of a rich man. The best teachers are very little influenced by the amount which they earn by teaching; and men engaged in scientific research constantly sacrifice their financial interests to the passion for their work. In such cases as these the satisfaction that results from the attainment of excellence is clearly seen, but it is just the same kind of satisfaction that the ploughman feels when he drives a straight and even furrow, or that the potter feels when he shapes a jar evenly and correctly out of well-prepared clay.

The economist is interested in this fact, that people feel satisfaction in doing good work, because the maintenance of this feeling has an important influence on Production. Things that are well made will satisfy wants better than things that are badly made, and are therefore, of more value as wealth and so the production of wealth is greater when the articles produced are such as to give satisfaction to their producer than when they are badly made and hurriedly finished so as to be sold as soon as possible. The conditions under which work is carried on

may thus have a material influence on the quantity of wealth produced by that work. Take the case of a silversmith who is accustomed to give his very best work to every article that he shapes, who takes pride in the excellence of his work, and who will not offer for sale anything that falls below his standard of excellence. Then consider the same man when, for any reason, he got into debt, and finds himself bound to work for a merchant who has no appreciation of artistic excellence, but wants only showy things which he can sell to purchasers who do not know good work from bad. The workman must obey his master, but he will no longer get satisfaction from his work; he is not doing the best work of which he is capable, and some portion of his productive power is being wasted. More than this, as time goes on he gets accustomed to the new conditions, till he can no longer turn out really good work, nor would he care to do so if he had the chance. In such cases the waste of productive power may be very great, whether it be that of a silversmith working for such a master as we have described, or of a teacher serving under authorities who place no value on good teaching, or of an imaginative writer compelled to do the daily work of a low-grade newspaper; and the point is of particular interest to Indian students, because the decline of the old artistic industries of the country is due in large part to the employment of the best workmen on inferior work.

We have seen in this chapter that, though there is a distinction between manual labour and intellectual work, the same sort of considerations apply to both classes regarded as factors of Production, and it is of great importance to realise that the two classes are to a great extent interchangeable, and that the tendency of the

world is towards an increase in the amount of intellectual work and a reduction in the amount of manual labour. This tendency has hitherto had such little effect in India that Indian students are apt to be puzzled by the attitude towards Production adopted by some European writers, in whose books manual labour receives comparatively little attention; the change depends largely on two processes—the introduction of mechanical power, and the introduction of machines.

By mechanical power is meant the employment of engines driven by steam or oil, or by some other source of power, in place of using the muscles of men. The first step in this process was to make animals work—a pair of bullocks yoked to a plough or a cart can do as much work as a large number of men using only their muscles; and the employment of cattle and horses thus economises in the aggregate an enormous quantity of manual labour. In the same way, a locomotive engine can do as much work as a great many pairs of bullocks—a goods train drawn by one engine may carry 12,000 maunds of produce or more, a load which would require several hundred bullocks to move, and it can move this quantity much more quickly than the bullocks could move it. One engine therefore does work that would require the muscles of an enormous number of men, and it is safe to say that the work now done by engines on the railways of India could not possibly be done by manual labour, even if the whole population of the country were employed in carrying goods. Apart from the railways, in many parts of India there are as yet few examples of the use of mechanical power, but the number is rapidly increasing, and many students must be familiar with jute mills or cotton mills, with cotton gins and presses, with flour mills, with pumps for water-works,

and with various factories where most of the hard work is done by engines driven by steam or oil

The second process is the introduction of machines. We have seen that manual labour is done by movements of the muscles, and that its chief effect is to alter the position of things. Now it has been found by experience that machines can be constructed which will perform most movements similar to those effected by the muscles. machines will make most movements at least as accurately as men, and certainly much more quickly if they are driven by mechanical power; and such machines now do most of the work of the world, though in India they are still comparatively rare.

Take as an example the simple case of the operation known as ginning cotton, which separates the fibre from the seeds on which it has grown. This was formerly done entirely by hand: women or children pressed the seed-cotton between two rollers with one hand, while with the other they turned a wheel which kept the rollers moving, and the rollers tore the fibre away from the seed. Ginning by hand may still be seen in some places, but in nearly all the tracts where cotton is an important crop, the work is done by machinery, and the cultivator sells his seed-cotton to the owner of a factory. A machine-gin is just like a hand-gin, except that the rollers are much larger. the difference is that the power that moves them is obtained from a steam-engine instead of from the muscles of human beings. In the same way most of the cotton is now spun into yarn by machines worked by power, and much of the yarn is woven into cloth by power, though hand-looms are still to be found working in most towns.

These two processes—use of mechanical power, and use of machines—have in some countries, and particularly in

England, advanced so far that (except in agriculture) comparatively little work is done by hand. Most of the wealth produced in England is made in large factories similar to those that can be seen in Calcutta, or Bombay, or Cawnpore, and consequently English writers regard this as the ordinary condition of things. The same processes are at work in India, and, so far as can be foreseen, they are likely to extend until hand-labour, such as now prevails, ceases to be important in the towns, and diminishes in importance even in the villages. In regard to labour then India may be regarded as approaching gradually to the conditions which prevail in Europe, though still very far from those conditions. It would take us too far to indicate in detail the effects which this great change may be expected to produce, both in regard to the production of wealth and in regard to the welfare of the labouring classes. Speaking in general terms, it is almost sure to result in a great increase in the production of wealth, and also in an increase in the welfare of the producers; but during the period of transition labourers trained on the old lines may suffer great hardships owing to the loss of their means of employment, and one of the chief sources of interest in studying the industrial history of Europe must be to ascertain how these hardships were felt in other countries, and how they can be avoided or mitigated in India. At the same time, students should realise that this change is not inevitable though its occurrence is probable we shall return to this point in a subsequent chapter.

CHAPTER XII.

CAPITAL

It is now time to consider the third factor of Production, which is commonly spoken of as Capital ¹ We have already indicated in general terms what this word means. It covers the materials a man has for use, the goods he has ready for sale, the tools and machinery which he uses, and the money which he employs in paying wages and in other expenditure incidental to the process of production which he is carrying out. Different writers have given rather different definitions of the word, and in this case again it is necessary for a student to make quite sure what is meant by each writer whose books he reads. As a rule, however, he will find (1) that Capital is a part of Wealth, and (2) that Land (in the sense explained in Chapter VI) is excluded from the idea of Capital. Capital then is part of wealth other than land, and we have to distinguish wealth that is Capital from wealth that is not Capital.

The simplest way of making this distinction is to consider

¹ The older word for Capital was Stock, and students will find it used by Adam Smith in *The Wealth of Nations*. It is still used in some forms of business. We speak of the stock (live-stock and dead-stock) of a cultivator's holding, and of the stock-in-trade of a merchant, such things forming a large part of the capital of these classes. But the word Capital has gradually superseded Stock in ordinary business use and also in writings on Economics.

the intentions of the person who possesses wealth · it is Capital if he intends to use it for the production of wealth , if he does not so intend, it is not Capital, though it may at any time become Capital if his intentions change. So that we may define Capital with sufficient accuracy for our present purpose as all wealth (other than land) which is intended to be used for the production of wealth At a later stage students will have to consider the difficulties that arise with this definition, as with others that have been proposed, but for the present it is enough to say that, while questions can always be raised about the exact limits¹ of Capital, the description given applies quite clearly to practically all the Capital that exists in the world.

The exact meaning of this description may be made plainer by a few illustrations in addition to those already given in Chapter V. We have seen there that a cultivator uses a good deal of Capital, consisting partly of wells or other land-improvements, partly of his cattle and implements, partly of his seed-grain, and partly of the money or grain that he uses to maintain himself and pay the wages of his labourers. The question may be asked · Is all the grain stored in a cultivator's house to be regarded as his Capital ? The answer is that it depends on the purpose for which he intends the grain. If it is to feed himself and his cattle, or to pay wages to labourers, or to be used as seed, it is Capital; if it is to be given away in charity, it is not Capital. And as nearly all cultivators give away some of their store in charity, a certain proportion of the grain stored by them is not Capital.

¹ On this point students may be reminded of the remarks in Chapter IV regarding the nature of many of the definitions used in Economics

To take another illustration Suppose a landholder has a lakh of rupees in his treasury is this Capital ? It is not Capital if he merely means to keep the money hoarded : it is Capital if he means to employ it in production, say, by lending it to his cultivators to enable them to buy seed and cattle, and he can make his hoard into Capital by the simple process of deciding that he will employ it for production

In the same way it is possible to give a direct answer to almost any question whether a thing is Capital by considering the purpose for which the thing is intended to be used, and students can easily make themselves familiar with the idea of Capital by discussing from this point of view the things that they see around them in the city and in the country

Now, at the present day practically everyone in India who is producing wealth uses some Capital, though the amount used by individuals differ enormously. In the illustration of the grass-gatherer, which we used in Chapter V, we supposed, for simplicity, that at first he used no tools of any sort, but it would be impossible to find a man in that position, except among some of the forest-tribes in the most backward parts of the country ; even the water-carrier has his water-skin, and the sweeper has his broom. Capital then is not only a factor of production, but a *necessary* factor People cannot produce wealth without it, and this is even more true of European countries, which have made greater industrial progress ; in fact, as students will discover when they read economic history, the tendency of progress is to increase the amount of Capital required relatively to the number of workers. How then does a man who wishes to produce wealth obtain the Capital that he needs ? He can either save it, or get

It from some one else who possesses it These two processes require some consideration.

The meaning of the term *Saving* is that a man does not spend all the wealth that comes into his possession, but puts some of it aside for future use, just as the grass-gatherer of our illustration saved up pice till he could buy a reap-hook It is this process which leads to an increase in the wealth of the country, and in ordinary life there is no other way by which the stock of wealth can be increased, since if all the inhabitants consumed wealth as quickly as they received it, it is obvious that no stock can be accumulated All the wealth then that is used as Capital must be the result of saving, effected at some time in the past; the amount of it is not increased by the other processes we have mentioned, getting wealth from some one else who possesses it This second process may be effected in various ways. A man may take Capital from someone else by force or by fraud; this method has been popular in India during many epochs, but has not been permitted when a strong government was in existence, and at the present time it is forbidden by the Indian Penal Code, and prevented as far as possible by the police. Or a man may inherit Capital from his father or some other deceased relative. This, of course, happens frequently, but it is only by accident that Capital is left to a man at the time he wants it; and a man who wants Capital cannot rely on some rich relative dying at the most convenient time. Again, a man may voluntarily give Capital to another This method of getting Capital is by no means unknown in India, but it accounts for only a very small portion of the Capital that changes hands Almost the whole of this passes either by inheritance or by the fourth method—that is by borrowing, where the borrower promises to

return the Capital lent, and in most cases to give something more (in the form of interest or otherwise) in consideration of the loan

We cannot trace the history of India back to the time when the process of saving first began, that is to the time when there was no accumulation of wealth. That time must be far beyond the period to which the earliest Hindu scriptures relate, because even then there must have been a considerable stock of wealth in existence. Judging by what is known of the lives of the most backward races in the world, it is probable that the practice of saving developed at first very slowly—people got gradually into the habit of putting away food when they found they had more than they could eat at the moment, they devised the very simple tools and weapons that many savage tribes are known to have used, and they tamed some animals. It seems probable that the accumulation of wealth was started along these three lines, but we cannot say—though we may argue or guess—when they developed, or in what order they came. These three ideas, however, a store for future consumption, tools or implements, and tame animals, taken together make up the whole conception of Capital, and when once they were established the conditions existed under which wealth could be accumulated, and in turn could be used for producing more wealth. The progress of this accumulation may be read in economic history, for the present purpose it is enough to say that the general tendency is for wealth to accumulate with increasing rapidity. The process of accumulation may be checked, and the stock of wealth may even be diminished for the time by wars or by calamities such as famine; but the greatest hinderance to accumulation has usually been found in the absence of a government sufficiently strong

to ensure that people shall be able to keep the wealth to which they are entitled.

It is well to emphasise this need for a strong and stable government, because when it exists people are very apt to accept its existence as natural, and to overlook its advantages while they complain of its drawbacks. Men will only employ their wealth to produce more wealth if they have a reasonable prospect of enjoying the wealth when it is produced. If they have not that prospect, they will not risk the wealth they possess, and will not struggle to accumulate additions to their stock. When, therefore, complaints are heard of the harshness of government, and of the rapacity of the police, it is well to remember that in India at the present time, though theft and fraud are not unknown and though bribes may be paid, the great majority of the people have confidence that they will be able to keep whatever wealth they acquire. and it is just this confidence which is necessary before people will devote their energies to the production of wealth.

We have been speaking of the accumulation of a stock of wealth. This is not just the same thing as accumulation of Capital, because people may accumulate wealth without intending to employ it in production, and wealth becomes Capital only when this intention comes into existence. In India, as in other countries, there is a strong inclination on the part of the people to accumulate a stock of wealth, but there is not yet the same inclination as elsewhere to employ the stock of wealth as Capital, and a very large proportion of the wealth of the country is not at present Capital, though it can become Capital if the owners so decide. The main reason for this fact will be found in the want of security which existed for centuries before the present government was established. People then wanted

wealth, as they always want it, but they had the greatest difficulty in keeping it when they had got it. They thus developed the habit of keeping their wealth in forms where it could be easily hidden and easily carried away, and gold or silver or precious stones were the forms usually chosen because they most nearly fulfilled these requirements. And this habit of hoarding, as it is called, still survives when the need for it has passed away, so that there is a very great aggregate of wealth lying useless in the hands of the people, while there is a very great need for more Capital to increase the productive powers of the land and the people of the country. The consequence is that the country is poorer than it should be, because its productive resources are not fully utilised, and students of Economics should realise that, at the present time, one of the greatest practical needs of the country is to secure the employment as Capital of the wealth that is now lying unused, in order both to increase the wealth obtained from the soil and to develop those industries which can profitably be carried on.

CHAPTER XIII.

THE ORGANISATION OF PRODUCTION—THE SELF-SUPPORTING STAGE.

WE have now to enquire how the factors of production, which have been described, are organised, that is, how they come together, or are brought together, in the proportions in which we find them at work. The description of the way in which the organisation of production has gradually developed forms one of the most important divisions of economic history. A great deal is known on this subject regarding certain countries, but many of the facts regarding India are still obscure, and there is a wide field for research in this direction. The development has certainly been gradual, and changes have for the most part taken place slowly, so that a full description of it would be very long, and cannot be attempted in this book. For the present all we can do is to examine a few stages in the development, and indicate some of the causes that have led to gradual change. For this purpose we will consider three stages, which may be called :

(a) The stage of self-supporting groups.

(b) The artisan-stage : market-production on a small scale

(c) The factory-stage : market production on a large scale.

It must not be supposed that these stages follow each other throughout the country in regular order, as April follows March and May follows April. So far as we can see, the development has been very gradual, and its speed has varied very greatly from place to place, so that at any given moment various stages can be seen side by side, and the process of change can even be watched. And this is true of the present day—we can see the most primitive methods of production side by side with the latest inventions, and there is hardly a country in the world that now offers the same opportunity for a study of the whole subject. And the speed of change has varied not only from place to place but from one industry to another. Agriculture in particular has progressed very slowly, the country is still largely in the first stage in regard to this occupation, and it is by no means improbable that it may remain so for an indefinite period.

What is meant by *self-supporting*—the term by which we have characterised the first stage? We mean that a group of people themselves produce all the things which they require to satisfy their wants, and that they obtain nothing from people outside the group. Probably this condition may be found to exist among some of the forest-tribes even at the present day, but in its pure state it is no longer of practical importance, because nearly all the people in India now satisfy some of their needs by buying some things that have been produced outside the group to which they belong. But it is most important to recognise that the whole agricultural system of the country seems to have grown up under these conditions, and that many villages are still very nearly self-supporting as regards the satisfaction of the wants of their inhabitants, and since agriculture is much the largest productive industry in the

country it is worth while to consider this stage in some detail.

If we examine the conditions that exist in the most backward parts of the country, and exclude such features as are clearly due to the modern development of trade, we find the people living in villages which are very nearly self-supporting. The people are of three classes—cultivators who hold the land, labourers who work for the cultivators, and servants or artisans. The cultivators till the land : and the produce is used in satisfying their wants and those of the labourers, servants, and artisans, all of whom are remunerated for their service by portions of the grain obtained at harvest. Let us see how this works out in detail. A man wants for himself food, clothes, shelter, fire, light, cooking vessels, water ; and the cultivator needs also seed, implements, and cattle. For food, there is the grain and pulse grown in the village, as well as sugar made from the sugar-cane and oil from some of the various seed crops. For clothes, there is the cotton grown on the land, and spun and woven into cloth in the village. For shelter, houses are built of earth dug in the village, and roofed with wood from the waste land, and either thatch made of straw or tiles made of earth. Fuel comes from the trees growing on the waste land and from the dung of cattle. Light is obtained by burning the oil pressed from seeds ; and the potter makes cooking vessels from the earth of the village. Water comes from streams or wells, and there is no doubt that when the site of a village was first fixed the presence of water, either on the surface or below it, was one of the points taken into consideration. Then as to the cultivator's needs ; his produce supplies seed for the next crop : the village carpenter makes the implements he needs, and the cattle are bred and reared on the waste

land of the village If rent or revenue has to be paid, it is paid from the grain at harvest-time

A village then could live in this way in isolation if, as is the case, its inhabitants help each other in difficulties, and look for help in return One man, for instance, may have cotton to spare, and may exchange it for sugar, just as is done even now ; but there is so far no need to offer any of the produce to people *outside the village* in exchange for things which they will bring from a distance There is thus no need for money, and no need for trade, and it is difficult for us to think of a country without money or trade yet it is highly probable that the agriculture of the country was originally established without their aid.

There are, however, two wants which we have not yet mentioned, and which may indicate the need for a slight modification in this statement One of them is salt As is well known salt can be washed out of the ground in many parts of the country , probably some villages met the need in this way, but it seems likely that salt is one of the first articles in which trade grew up, and that merchants carried it round the villages and exchanged it for grain or other produce, as is still done over a large part of the country. The other want is iron for tools Even now agriculture is carried on with the aid of a quantity of iron that seems ridiculously small to European cultivators, but a certain quantity is used everywhere in ploughs, reap-hooks, and other implements, and the use has lasted for a very long time It is quite possible that originally no iron was used in agriculture, but here too it seems likely that iron was one of the first things in which trade developed

Now let us consider what were the conditions of production at this stage The cultivators had *Land* to cultivate, whether they found it vacant and settled on it, or whether

they obtained it from a Raja in return for the share in its produce which was known as revenue. And having once got land, they ordinarily kept it, probably because when the population of the country was small there was enough land for everyone. For *Labour*, there were the cultivators and the members of their families, and there were the labourers living in the village ; probably these last never thought of going anywhere else and simply obeyed the cultivator's orders, and took the share of produce which he gave them for their support. For *Capital*, there was the stock of cattle, gradually increasing in ordinary times, with enough waste land near the village to support a large number there were the implements made in the village of materials found there, and paid for by a share in the produce ; and the produce yielded the seed-grain that was needed.

Now in these conditions, with no trade to take away surplus produce or to bring desirable things from outside, it is probable that the wealth of the community would increase very slowly if it increased at all, and that the existing agents of production would not be fully employed. There would be produce to spare in good seasons, and it would be stored for the time and consumed when seasons were unfavourable and the crops poor : but there would be no motive for producing much more than was likely to be required, and it is probable that only enough land would be cultivated to support the population dependent on it ; and that, taking good and bad seasons together, all or nearly all the produce would be consumed. If the population should decrease, less land would be cultivated, while if it should increase new fields would be ploughed out of the waste land, and possibly more trouble would be taken with the land already cultivated. Thus such a community could not be expected to increase largely in wealth.

Suppose now that a town comes into existence in the neighbourhood of self-supporting villages of the type that has been described. The townspeople will want to buy from the villagers things like grain and pulse, vegetables, milk and *ghee*, oil-seeds, cotton and sugar; and they will be able to supply the villagers with things brought from a distance—new spices and condiments for their food, brass and copper vessels, better clothes than the villagers can produce, jewellery and ornaments, and so on. This makes a great change in the position of the villager—he finds within his reach desirable things of which he has never heard, and he begins to want a share of them for himself (or, if he himself does not, his wife does), and in order to get them, he increases the amount of his production, that is to say he works harder himself and makes his cattle and labourers do more work, and so either cultivates a larger area or gives more labour to the land already in his possession. The village then will produce more than in the old days, and the villagers will sell their surplus to the town, and spend the money which they so obtain in buying the things which the town supplies.

The village has then ceased to be a self-supporting group, because it can no longer satisfy all its wants by its own produce, and it is on the way to the second stage of production, which we have described as 'market-production on a small scale,' because the cultivators are now producing partly with a view to selling their produce. Let us see how this change will affect the accumulation of wealth. In the first place there is no doubt that the produce of the village will be increased, and, as a rule, a large proportion of the money obtained for the extra produce will be spent on desirable things that will last for a long time, such as brass vessels or silver ornaments. This means of course—

that the stock of wealth is increased. ^{accumulating} In the second place, when money is received, the idea of hoarding it, which is part of human nature, is sure to make its appearance, and cultivators will work harder and produce more wealth merely in order to increase their hoards, and in this way too the stock of wealth will accumulate. The villagers then will tend to grow richer.

At first sight it may seem that this conclusion applies only to the cultivators, and most probably they would be the first to benefit. But if the town wants labourers, as is likely to be the case, it will look for them in the villages, and the wages offered may tempt some of the village-labourers into the town. There would then be fewer men to do the increased work on the land, and the cultivators would have to induce them to work harder by offering them something more than the share of the produce that was sufficient in the old days, and so the labourers would in time get their remuneration increased. In the same way the workmen and servants would be attracted to the town by the higher wages offered there, and it would be necessary to pay them more in order to induce them to stay in the village, so that the increased wealth would be shared by all classes, though by no means in the same proportions.

Now a change of this sort has been going on slowly in India during the last few centuries. For the sake of clearness we have supposed that the conditions changed suddenly; this probably happened in a few localities where a new capital city was established, but over most of the country the change has been gradual. Trade has extended slowly; traders have come to the villages to buy first one kind of produce and then another; and in the same way first one desirable thing and then another has been brought within the reach of the villagers. The

change is still in progress : some parts of the country have advanced much further than others · but the general effect has been to increase very greatly the produce of the land, and the wealth of the people who share it ¹ The change is not complete there are very few localities in India where agriculture has reached the second stage, and (as has been said above) it is possible that it will never be reached completely ² For illustrations of this stage we must turn to the towns.

¹ This does not mean that all classes of the people are better off than they were · some have gained much more than others, and some may have lost ; but this question concerns primarily the Distribution, and not the Production of Wealth.

² If a village had completely reached the second stage, cultivators would sell all their produce, and would go to shops to buy even their food , this actually happens in some countries, but no one who knows how Indian cultivators live will expect to see it in India until the whole life of the country changes.

CHAPTER XIV.

ORGANISATION OF PRODUCTION: THE ARTISAN STAGE.

WE have now to examine the second of those stages of production which we have selected for consideration. It is distinguished from the first stage by the fact that the producer does not attempt to satisfy his wants directly by those desirable things which he produces: he intends most or all of these things to satisfy the wants of other people, and he supplies them to other people in exchange for payment. The payment may be made in the form of things which he wants to consume, such as grain, but more usually it is made in money, with which he can buy the things he wants. This stage is familiar in every town in India, for it is the position of the great majority of the artisans. The weaver, the dyer, the brass-worker, the shoemaker,—these men cannot satisfy more than a very few of their wants with the actual things which they produce: they must sell their produce, and feed and clothe themselves with things bought with the money which their produce brings. Let us examine their economic position in regard to the three factors of production.

First, as regards Land. The amount of land which they require is usually very small, much less than even a small cultivator needs; but, as we have seen in Chapter VI., its

situation is a matter of great importance. The artisan must be in a place where customers will know where to find him ; not only, that is to say, must he be in a town, but often he must be in a particular street or lane where the business in which he is engaged is known to be carried on. A shoemaker, for instance, will pay what for him is a large sum as rent to secure a shop in the street where people are accustomed to go to buy shoes, and he would not pay so much for a shop of the same size in a grain-dealer's street. Thus, though an artisan needs very little land, it is often not easy for him to get it exactly in the place where he wants it, and his rent may take a considerable portion of his income.

Secondly, as regards Labour The artisan and his family as a rule do most of the manual work, though he may have to hire one or two labourers to help. Ordinarily he uses only a few kinds of material and makes things of only a few patterns ; he thus goes through the same actions over and over again, and acquires a very high degree of skill in performing them. But besides doing the manual labour of production, the artisan has to carry on the business also. This means that he has to choose the material to be used, agree on its price, decide what particular things to make and how many of them, fix their price, and find people who will buy them. A man in the self-supporting stage has also to do the business, as well as the labour, of his occupation, but the business is easier for him than for the artisan producing for sale, because he has to think almost entirely of satisfying his own wants, while the artisan has to satisfy the wants of other people. The artisan then must know what other people are likely to want, and this is much more difficult than knowing what he wants himself. If he makes a mistake, he finds that he has wasted his labour

and his material in making things which nobody will buy, and if he cannot sell them, he has no money to buy more materials, or to feed himself while he is making other things.

In the early stages of the progress of a community, this necessary knowledge of business is not beyond the reach of the artisan. People then have comparatively few wants, and they do not change rapidly, while on the other hand, with little trade, there is usually not much choice of materials. But as we shall see when discussing Consumption, the economic progress of a nation means an increase in the number and variety of wants, and a larger choice of the means of satisfying them; it thus becomes more and more difficult for the ordinary artisan to keep pace with these changes, and where he fails to do so, his labour and material is wasted. The weaving industry furnishes a good illustration. Not very long ago, practically everyone in India, except a few of the richest men, wore cotton clothes made on hand-looms by the artisan-weavers of the locality. Only a few kinds of cloth could as a rule be got locally they were well-woven and durable, but coarse, and people dressed very much alike. But now, even in the country, people have a much wider choice of clothes. They can buy the old type of country-made cloth; or finer cloth woven in the mills of Bombay or Cawnpore or still finer cloth woven in Europe, from cotton grown in America or Africa or they can get cloth made of wool or of silk if they are prepared to pay for it. People then can satisfy their want for clothing in various ways, but the country weaver has not the materials, or the tools, or the knowledge, required to produce the kinds of cloth that are most wanted, and the demand for what he can produce has consequently fallen off until he sometimes finds it hard to sell his cloth at all.

While then the artisan working for himself has the incentive to hard work arising from the fact that his income depends entirely on his skill and industry, his weak point is his inability to keep pace with changes in wants and with the development of new markets ; and thus the economic progress of a country may often result in injury to the artisan's position.

Then as regards Capital The needs of artisans vary greatly : some need expensive tools : others require few tools but have to spend a great deal on materials while others, whose work takes a long time to complete, need a relatively large sum to live on until their work is ready for sale But all are alike in needing Capital for some or all of these purposes. They are fortunate when they possess this as the result of their own savings or the savings of earlier generations of their family : they are then free to work for their own advantage, and—so long as their business-ability is sufficient for the conditions in which they live—can hope to produce more wealth than they need consume, and thus can save and increase their stock of wealth. But very often they have not all the Capital that they require, and have to borrow some of it and then the interest which they pay may be so high that what is left of their income after paying it is only enough to keep them alive, and leaves nothing over which they can save Their position thus depends very largely on the rate at which they have to pay interest, a point that will be discussed under Distribution ; but in India at present the rate of interest is so high that a large proportion of the wealth produced by artisans is paid to the people who lend them Capital, and consequently the artisans as a class have not much margin for saving. They produce wealth, but most of what is left over after providing for their subsistence is taken by the owners of

Capital; and the high charge for Capital is almost as great a drawback as is the difficulty of keeping pace with the increasing diversity of wants.

As we indicated in the last chapter, the Indian cultivator has to some extent passed beyond the stage of self-supporting production, because some portion of his produce is grown for sale, but he has not yet reached the second stage in which we find the artisan, and it is doubtful if he will ever reach it completely. But in so far as he produces for the market and not for his own consumption, he has difficulty, just like the artisan, in managing his business—that is, in knowing what to produce and how to sell it. The difficulty was not great in the simple case which we first supposed, of the cultivator selling to the inhabitants of a neighbouring town; but it becomes very serious when trade has so far developed that the produce is taken for sale to distant places, and has to compete with produce from other parts of the world. It is at present impossible for the cultivator to know what kinds of wheat or oilseeds, for example, are most wanted in England or Germany; and though produce of this kind is hardly ever likely to be entirely wasted for want of a market, he may lose a great deal of money by producing kinds which are little wanted instead of kinds which are much wanted and which will fetch a higher price. Again, cultivators may have devoted themselves to producing some particular thing that has been wanted elsewhere, and then find that the want has ceased to exist or is being satisfied in other ways, they have then to change their methods in a hurry and plan out other ways of using their land, while they lose the advantage of the skill which they have acquired in growing that particular crop. This has happened quite recently in two instances in northern India. indigo has

almost disappeared from large areas where it was extensively grown, because the want which it met is now satisfied by a dye prepared by chemical processes; and many cultivators have had to give up sowing poppy because the Chinese will no longer buy as much of the opium produced from this plant as they formerly took.

And while the cultivator is at a disadvantage in not knowing accurately the wants of people at a distance, he may suffer also because people at a distance have been able to discover the wants of India and are able to meet them better than he can. Thus, too, has recently happened in the case of sugar large classes of people in Indian towns and cities find that they can satisfy their wants better with sugar brought from foreign countries than with the kind of sugar which the cultivator makes, and so cultivators in some parts of the country have difficulty in selling their sugar and are producing less than they did

The cultivator also suffers, like the artisan, from the high cost of borrowing Capital when he needs more than he possesses, and his need for Capital has increased since he began to produce for distant markets; more Capital is needed to grow wheat than to grow barley, and much more is needed to grow sugarcane; the produce of the new crops represents more wealth than the old, but when the cost of Capital is high it may take the whole of the extra wealth and leave the cultivator no better off than before. While, therefore, the increase in trade has greatly increased the wealth of the country, a large share of this increased wealth has been taken by the people who have Capital to lend.

Thus the cultivator, so far as he produces for the market, suffers from the same drawbacks as are felt by the artisan.

business is increasingly difficult to manage, and Capital is dear ; and the more nearly the cultivator approaches to the second stage of production, the more apparent do the drawbacks become.

CHAPTER XV.

ORGANISATION OF PRODUCTION: THE FACTORY STAGE.

WE now turn to the third of the stages of production which we have chosen for examination. In this stage we find large numbers of men working together under the direction of an employer. This, as we have said, is the condition which industrial production has now reached in most of western Europe, where the independent artisan is of comparatively little importance, and the same condition has in recent years been established in the case of some industries in India, particularly mining and spinning. It is rare in the case of agriculture, and at a later stage students will have to study the reasons for this fact; but the production of tea is to a great extent effected on this system.

A simple case may be taken as a first illustration. Suppose that a man persuades 100 hand-weavers to set up their looms in a building belonging to him, and to work for him in return for wages (which may be fixed either by the duration of work or by the quantity of cloth woven on each loom). The employer buys the yarn and other materials, decides what kind of cloth is to be made, and arranges for its sale, and he keeps for himself the money realised by sale. The first effect of this arrangement is

obvious : the business is separated from the manual labour. The weavers have no longer to think and plan, but merely to make the kind of cloth which the employer orders, all the thinking and the planning are done by the employer. The next effect also is obvious the weavers have no longer to provide Capital, for the materials they need are supplied to them. and they live on their wages ; the employer has to find the Capital for buying material as well as for paying wages.

This arrangement, then, would remove both the main drawbacks of the life of the artisan, as described in the last chapter ; as was there pointed out, the weaver can weave, but he has difficulties both in business and in getting Capital. If there were no other changes in the methods of production, it might pay a business-man to make this change, because his greater knowledge and skill in business would enable him to get material cheaper and to sell cloth dearer, while he would be very unlikely to make anything that could not be sold. On the other hand, it is probable that the amount of cloth produced under this arrangement would be less than when the weavers were working independently, because they would have less incentive to hard work. They need only work hard enough to avoid being fined or dismissed, whereas before they worked their hardest in fear of starvation. But this question does not, in fact, arise, because changes in the methods of production would be bound to follow.

The first change to be considered is known to economists by the name of Division of Labour. Everyone knows that an artisan-weaver does not spend his whole time sitting at his loom : every now and then he has to leave it to prepare a new 'warp,' the name given to the threads of yarn that are stretched on the loom. Weavers can be

seen at this work in every town. the warp is stretched on stocks, usually by the roadside, and certain substances (known as 'sizing'), are spread on it and brushed in until they have been absorbed in the yarn. Much of a weaver's time is spent on this work; but where many men are employed, it is much better for some of them to spend all their time on preparing warps while the rest do not leave their looms. Thus the *labour* of weaving is *divided* into two parts, the preparation of the warps and the working of the loom. hence the expression Division of Labour. Similarly the labour of preparing the warp would again be divided, some men being employed only in making the sizing, and others in putting it on the yarn: the work would be so distributed among the weavers that each would make only one kind of cloth, and the most skilful men would make the finest kinds; one or more men would be told off to keep the stock of yarn, to measure the cloth made, to send it to purchasers and so on; and a carpenter would probably be kept to repair the looms, and make new pieces to replace those that wear out. Thus there would no longer be 100 weavers, each doing all the work of an artisan, but there would be several grades of work in the factory, and the workers of all grades would be organised by the employer so as to make as much cloth as possible, and at the lowest possible cost.

The numerous advantages in production which are secured by Division of Labour are set out in detail in most of the larger treatises on Economics. The most important of them probably are (1) the development of skill when a man spends his whole time at one kind of work; and (2) the possibility of getting from each workman the best work of which he is capable. The first of these needs little explanation beyond what has been said in Chapter X.

regarding the acquisition of skill: the fewer motions a man has to execute, the more nearly perfect will he become in their performance. As regards the second, some kinds of work are more productive and at the same time more difficult than others. A weaver who can produce a pattern in fine cloth can earn more than one who can only weave plain, coarse cloth: when working for himself, he may sometimes have to make coarse cloth because he cannot sell the better quality; but when working in a factory he will spend all his time doing the best work of which he is capable, and the sale of the produce is the business of the employer.

One great advantage then of the factory-system is the possibility of introducing division of labour, which results in increased produce from the same number of workers, and also probably in a better quality of produce due to the greater skill that the workmen acquire. The second great advantage is the possibility of using machinery. A first glance into a large factory is very confusing there is steam, and noise, and there are many pieces of metal moving very quickly in complicated ways; but if a student can look closely at any one of the machines, he will find that it is doing exactly the same kind of work as a labourer or artisan though it is probably doing it more quickly and on a larger scale. If, for instance, he can examine a factory-loom, he will see that the shuttle flies backwards and forwards just as it does in a hand-loom, only that it goes more quickly, and that each thread left by the shuttle is pressed into its place before the shuttle returns just as with the hand-loom, the processes are exactly the same, but the parts of the factory-loom are moved not by the muscles of workmen but by the engine, which is caused to move by steam produced in the boiler. The new thing is in fact not the

loom itself but the way in which its parts are caused to move ; and this is true of practically all the machines that can be seen in factories. It is possible to make a machine which will perform any regular motion that a man can perform,¹ either moving things back and forward, or moving them up and down, or moving them in a circle ; and in all factories the question whether any particular grade of work shall be done by men's muscles or by machines is simply a question of cost, and machines will be used if they can do the work more cheaply than men.

In the weaving factory which we have taken as an illustration, it is probable that the employer would find that he could do better business if he put up an engine and power-loom in place of the hand-loom with which he started. He would then be able to produce a very much greater quantity of cloth with the same number of workmen, because the men would no longer have to spend their muscular energy in working the looms, they would be employed in starting and stopping them as required, and in seeing that everything was going right. This change would mean that the skill which the weavers had acquired is no longer of much use — a well-made machine is more skilful in this sense than any man, and it can be trusted to go on making the required motions as long as it is kept in proper order. In place then of the weaver's skill, the employer will now want a different kind of skill, that of the mechanic who knows how to keep machines in order ; and he might decide that it is useless to keep skilled weavers, and might employ

¹ Machines can even be made to perform some of the simpler mental processes ; thus machines which add up figures are now very commonly employed in parts of Europe. They are as yet little known in India, because clerks able to do arithmetic can be got for salaries that are very low compared to those that must be paid in European countries.

women and children to look after the looms at lower wages, under the supervision of some trained mechanics

The introduction of machine-loom would not be the only change. Machines would also be introduced for preparing the warps instead of having this done by hand, and also for various incidental processes ; and the employer might decide to add a spinning-mill so as to prepare the yarn which he requires. There would then be a large factory, producing probably far more cloth than was formerly produced by the weaver-artisans in the neighbourhood, and producing it at less cost, so that people who want cloth could satisfy their wants more cheaply than before. The factory would provide employment for a large number of people ; but on the other hand it might deprive most of the artisan-weavers of the locality of their means of livelihood, because there would be no purchasers for what they could produce.

It must not be supposed that most factories grow up in the way that has been described for the sake of illustration ; the first factories did probably grow up gradually, but now that the nature and methods of a factory are well understood new factories are planned with complete equipment and organisation, and in some industries at least this designing of factories forms a separate profession. But whether factories are set up complete, or whether they develop gradually from small beginnings, the general features of the factory-system are the same. These features may be recapitulated as follows :

(1) The business of buying, selling and managing is separated from the actual work of production. the business is managed by the employer, and the work is done by the workmen whom he pays.

(2) The workmen have nothing to do with the supply of capital, which is part of the employer's business, and of

course they have nothing to do with the provision of land ; they have to supply labour only.

(3) The factory is so organised by introducing the division of labour and the use of machinery as to reduce the cost of producing to the lowest possible point ; and this organisation makes the production much greater than would result from the same number of men working independently.

(4) The introduction of the system, while it increases the amount of the wealth produced in proportion to the number of persons employed in production, may deprive some classes of the people of the only skilled work which they know how to do.

Students will easily see that the factory-system requires a much larger amount of capital than the system of small production. Buildings, steam-engines and machinery are all very costly, and a large sum is also required for what is called working-capital, that is, for buying materials and for paying wages and other expenses that must be met before the produce is sold. In fact, the factory-system is not generally possible until a country has made considerable progress in organising methods of bringing the savings of individuals together in sufficient quantity to be used for large enterprises. The development of such methods is the next subject that claims our attention.

CHAPTER XVI.

ORGANISATION OF CAPITAL.

THE organisation of capital is a subject of interest to students of Economics in all countries, but in India at the present time its importance is exceptionally great. We have just seen that the industrial progress of the country is dependent on this organisation, and the same thing is true of its agriculture; the Indian cultivator needs, more than anything else, facilities for obtaining capital on reasonable terms in order that he may get the best results from the land which he occupies and the labour which he furnishes. It is no exaggeration, therefore, to say that the organisation of capital is indispensable to the development of the wealth of the whole country.

We have seen that the accumulation of a stock of wealth is natural, in the strict sense of that word; that is to say, ordinary people are likely to save up a stock of wealth when they have the opportunity of doing so, and the opportunity comes when they can satisfy their immediate wants without consuming all the wealth which they produce. It is doubtful, however, whether the use of accumulated wealth as capital can be called 'natural': in the early stages of most communities the intention of using the stock of wealth to produce more wealth is not generally apparent, and a large portion of the stock is more probably intended for

consumption when the need arises. Certainly in India only a small part of the existing stock of wealth has been saved in order to be used as capital. Probably most of it has been saved primarily in order to enable the owners to live through a time of famine or some similar calamity. And so long as a man lives in fear of being robbed, it is not likely that a large part of his savings will be used for production; he is more likely, as we have said, to keep them in gold and silver, which can be hidden or carried safely from place to place. When a strong government has been established, the motive for such action ceases, but the habit remains; and even now the 'natural' course for a very large number of the inhabitants of India is to keep their stock of wealth concealed, or as the phrase is to hoard it. There is thus in the country a very large stock of wealth which is not capital, because it is not intended to be used in producing wealth. Some of it is well known, as in the case of the hoarded treasures of some Rajas and Nawabs, but the bulk of it probably consists in the small sums of money which ordinary people keep hidden away until they find it necessary to spend them.

Conditions are different in some other countries, where the practice of hoarding is rare, and where people save up a stock of wealth with the distinct intention of employing it in production and of getting an income from its use; and since the employment of savings in production is a necessary condition for a largely-increased production of wealth, it is important to see how this employment is managed. A cultivator or an artisan needs, as we have seen, some capital for his work but he may have a larger stock of wealth than he needs to use as capital, and the same is more generally true of landholders, officials and professional men, while even labourers often have small savings available for employ

ment When the owner of capital cannot himself employ it in production, he usually lends it to some one else who promises to pay interest for its use, and this practice is of course common in India in the case of those classes who make a profession of money-lending as well as in other cases. But it is sometimes difficult for a man who wants money to know who will lend it, and it is very often difficult for a man who has a little money to know who wants to borrow it; the first great step in the organisation of capital is the provision of intermediaries who will take money from those who have it to spare, and will lend it to those who need it. These intermediaries are known as Banks. Banks perform a large variety of functions, which students will have to study in detail at a later period of their course; but their primary function is to collect capital from the people who possess it, and lend it to the people who want it. In order to collect it, a bank announces its willingness to receive money on deposit, and promises to pay interest for its use, and to return it at a fixed period after receiving notice that the owner wants it back; and people who trust the bank, that is who believe that it intends, and is in a position, to carry out its promises, hand their money over to it. On the other hand people who want to borrow money go to the bank to get it, and the bank will lend it to them if it trusts them to pay the interest and to return the money when the period of the loan has expired. Naturally, people will not do the work of a bank for nothing: it aims to pay as low interest as possible on deposits, and to charge as high interest as possible on loans; and the difference between what it receives and what it pays constitutes its income, part of which is used in paying salaries and other expenses of management, while the rest is kept by the owners of the bank.

Banks are now familiar institutions in most Indian cities. The early ones were started by Europeans who were familiar with the system in their own countries, but the system is now being adopted by Indians who have seen its success. At present we are concerned only with the aid which banks provide in production, this may be very great, because they can lend the capital required by employers in order to buy materials and to pay wages and other expenses of production, the loan being repaid when the goods made are sold, and in fact a large proportion of the resources of banks are employed in this way, and the system of factory-production is thus very greatly facilitated.

The ordinary banks cannot, however, provide all the capital that producers require, nor can they collect all the money that is available for use as capital. Their chief limitations are two

(1) They cannot safely lend a large proportion of their capital for such purposes as the purchase of buildings or the purchase of machinery

(2) They cannot either lend or borrow in small sums

(1) We have said above that a bank must be ready to repay money deposited with it when the depositor wants it, if it is not ready to do this, people will not trust it with their money. Now suppose a bank has lent all the money it possesses to men who have spent it in building factories and setting up machinery, and then the depositors want their money back. The bank has no money to pay them, it has only the promises of the men who borrowed the money, and if they cannot borrow it somewhere else, then the bank must tell its depositors it cannot pay them. In other words it is bankrupt, and it is most unlikely that anyone would ever trust it with a deposit again. This is

an extreme case, but it illustrates one of the fundamental principles of banking, that the bank must always be in a position to pay what is due from it, and that most of its money can be lent only for short periods and with a reasonable certainty of getting it back at the end of the period. While therefore a bank is ready to lend money to any employer whom it trusts, to be used in the expenses of his business and paid back after a short period, it will very rarely lend money for purposes such as building a factory or buying machinery.

(2) In practice banks find that the expense and risk of dealing in very small sums is so great that no profits result. Some banks, which are anxious to get capital together quickly, may take deposits of as little as ten rupees, but it takes a long time for a man with a small income to save as much as this, and, in order to make the savings of the people available as capital, institutions are wanted which will take every rupee as it is saved. Similarly a bank will not lend to ordinary cultivators or to artisan-producers, because it could only trust them with very small sums, and it is not worth its while to lend a rupee or two at a time.

Banks then by no means complete the organisation of capital that a country requires for production. One great need is for a system of supplying capital for purposes such as starting and equipping factories. The other is for dealing with capital in sums too small for the ordinary bank to handle. The first of these needs is met by the establishment of what are known as 'joint-stock' or 'limited' companies.¹

¹ 'Joint-stock' means that people join their capital together; stock, it will be remembered, is the old word for capital. The word 'limited' has a history. Under ordinary law when people join their capital in an undertaking, each of them is liable for all the debts of the undertaking, not merely up to the amount he has contributed but up to the whole of his possessions. It is obvious that people

There are, of course, a few men rich enough to build factories and set up expensive machinery with their own capital, and many small factories (such as cotton-ginning mills) have been started in this way in India. But large factories, such as spinning mills or ironworks, require each many lakhs or even some crores of capital, and if they are to be started in considerable numbers it must be done by the contributions of many people. When a few men decide to start a factory, they usually form themselves into a limited company, and ask other people to 'take shares,' that is, to subscribe fixed sums of ten or fifty or one hundred rupees towards the capital which the company requires. If enough shares are taken, the money received for them is spent in setting up the factory, further capital for working it is borrowed if necessary from a bank, and the profits made by the factory are distributed to the shareholders in proportion to the amount of their shares. Thus a landholder, or a pleader, or a magistrate, or anyone with capital available, can take shares in ironworks, or cotton mills, or jute mills, or coal mines, or other productive industries, and receive in return an income, the amount of which depends on the success with which the industry is carried on. If he wants his money back, he cannot as a rule claim

would very rarely join a company on these terms, when an incompetent or dishonest manager might incur debts that would reduce them to poverty, and the system of limited liability was devised to remove this drawback. A company which complies with certain formalities (one of which is the use of the word 'limited' in its title), has the privilege that the liability of each shareholder is limited to the amount of his share, if he has promised to contribute a share of 100 rupees (either paying the whole sum at once, or paying a part of it and promising to pay the rest when required), he cannot in any circumstances be required to pay more than this; he may lose it if the business is a failure, but the rest of his property is in no way affected. A man who takes a share in a 'limited' company thus knows that his liability is limited.

it from the company, but he can sell his share ; and on the other hand a man who has money can buy shares in existing companies instead of contributing to new ones. The business of buying and selling shares is now so large even in India that there are brokers in Calcutta and Bombay and some other cities who make it their principal occupation, and arrange for buying and selling shares in companies, just as other brokers arrange for buying and selling wheat, or coal, or jute. Thus a man who has capital to employ, but does not want to engage in production for himself, has now two ways of disposing of it : he can deposit it with a bank and receive interest, or he can go to a sharebroker and buy shares in some companies, in which case he receives the profits due to those shares by way of income.

- The variety of companies is very great, and there are often different kinds of shares, while important questions arise in practice as to their constitution and management. The whole subject will require much study at a later stage ; our present purpose is merely to show the function that these companies perform in production ; they can collect a large capital in relatively small sums, and thus make it possible for men of enterprise to start a factory with much more capital than they themselves possess.

But though the shares in a company may represent relatively small sums of money, they are not small enough to attract the savings of the poorer classes. Special institutions to effect this object have been established in many countries under such names as savings banks, people's banks, provident societies and the like, which are designed to receive very small sums, in some cases as little as an anna at a time. Various kinds of banks too have been devised to meet the needs of small producers for capital by giving loans in very small sums. In India there is as yet no general

organisation¹ to serve these purposes, and small savings are usually hoarded unproductively, while small producers have to pay very high interest when they borrow from moneylenders; but there is good reason to hope that the need will be largely met by the co-operative societies which in the last ten years have been organised in considerable numbers. This movement will engage the student's attention at a later stage; at present we are concerned chiefly with the fact that the organisation for supplying capital for use in production is in India still very incomplete. Considerable progress has been made towards enabling the well-to-do man to invest his savings in production, but cultivators and workmen have neither convenient means of investing their savings, nor convenient means of obtaining additional capital

¹ The nearest approach to such an organisation is the Post Office Savings Bank, it receives very small sums on deposit, but it does not lend money to the public

CHAPTER XVII.

SPECIALISATION OF THE FACTORS OF PRODUCTION.

WE have now described three typical stages in the gradual development of production that has taken place in the world ; before leaving this subject it is desirable to direct attention to one general principle which can be found among the changes that lead gradually from one stage to the next. This principle can be spoken of as Specialisation, and it may be stated as a law in the following terms. The tendency is for Land, Labour, and Capital to become more and more devoted to satisfying some particular want, and at the same time to become less available for satisfying other wants. The meaning of this statement will become plain from the paragraphs that follow.

In the first stage of production which we considered, when a village or group of villages satisfies its own wants by the things which it produces, the land which is cultivated cannot be described as devoted to satisfying any particular want ; it is used to satisfy most of the wants of the village, for food, clothing, light and the rest. Progress towards the next stage, in which cultivators produce for a market, is marked by gradual specialisation ; experience shows the people that the soil and climate of different parts of the country are more suited to one crop than another, then each crop is grown more widely in the villages where it does

best, and each village tends to give up those crops that are most difficult to grow successfully. For instance, there is much evidence to show that formerly most localities in northern India grew both sugarcane and cotton, the former to supply the inhabitants with sugar and the latter to furnish material for their clothes. But this condition no longer prevails. It is now comparatively rare to find a locality that produces both sugar and cotton in large quantities. The two crops do not require just the same climate, sugarcane wanting a moister atmosphere than cotton, and sugarcane is now more largely grown in the relatively damp country near the Himalayas, while cotton is found mainly in the drier country to the south and west. Many villages, that is, no longer satisfy the wants of their inhabitants for sugar, because it is cheaper and more convenient for them to buy sugar than to grow sugarcane, and many villages grow no cotton at all because they can buy the clothes they want with the money they get for their sugar or other produce. This specialisation of Land is undoubtedly an advantage from the point of view of production, because the land is used for the crop that grows best on it. There is, however, the drawback already mentioned, that the cultivator has to know what is wanted by people at a distance, and may find his business seriously upset by a change in their wants. Specialisation of this kind is not confined to the case of particular localities in one country, but applies to the whole world. Thus practically all the tea that is drunk in Europe, Africa, America and Australia comes from three parts of Asia—China, Ceylon, and a limited area in Bengal and Assam, while the jute grown in a few Bengal districts makes the sacks in which nearly the whole of the world's trade in grain and oilseeds is carried.

Another instance of the Specialisation of Land is found in the localisation of particular industries. Even in the stage of market-production on a small scale this localisation has begun : particular towns, and particular streets in the same town, get a reputation for some particular product,—leather-work, or brass-ware, or whatever it may be ; people go there to buy the things for which the place is known, and artisans go there because they know that they can sell their produce, and that the materials which they need can easily be procured. Thus, almost everyone in northern India has heard of the brass-ware of Moradabad, or the silver-work of Lucknow, and these cities supply their wares not only to many parts of India but even to foreign countries. When the factory-system establishes itself, the considerations that determine where an industry shall be carried on are somewhat different, but the result is the same : each industry tends to be established in one or more localities, and cities or towns become specially adapted to the needs of a few industries. Thus, almost all the jute mills in India are close to Calcutta ; Bombay, Ahmadabad and Cawnpore are known as the chief centres of cotton-spinning, and so on. This localisation of industries conducted on the factory-system has important results for production, which are discussed in the larger treatises on Economics ; at present we are concerned only with the fact of localisation, that is with the specialisation of particular localities for production of a particular kind.

Next as regards specialisation of Labour. This exists to some extent even in villages, where we find artisans such as carpenters or potters, and servants such as washermen but most of the residents in a village are employed in the large variety of operations that are included in the term cultivation ; and even the artisans and servants often spend

part of their time in this less-specialised work, since the carpenter and washerman and so on frequently cultivate some land in addition to doing their specialised work. It is not difficult for us to think of a village without these specialised workers—cultivators and their families could make their own implements and do all their own work, but we can see that even in the villages that have made least progress this process of specialisation has begun. When we come to the second stage, the specialisation is obvious. the artisan satisfies very few of his own wants directly, but depends for his livelihood on his success in satisfying a few particular wants of other people. Thus, the brass-worker can satisfy no want of his own except a want for vessels or other things made of brass; in order to get food and clothes and satisfy all his other wants he must find other people who will be satisfied with what he has made. And in the third, or factory, stage of production, this process of specialisation is as we have seen carried much further: the whole business-part of production is done by one set of persons, and the labour by another set; and only a small proportion of the workmen could satisfy any single want of their own. The person who merely knows how to manage a machine-loom could not make a piece of cloth by hand any more than the driver of the engine could, he can only carry out one step in the series of processes by which yarn is made into cloth, and his work is useless without that of the other grades of workmen who carry out the remaining steps.

And in the same way the tendency is for Capital to become more and more specialised. Economists usually divide capital into two kinds, which are described as 'fixed' and 'circulating'. *circulating* capital is consumed in a single use, or, in the words of Mill, "fulfils the whole of its

office in the production in which it is engaged, by a single use"; *fixed* capital lasts longer and is frequently used, or, to quote Mill again, "exists in a durable shape, and the return" to it "is spread over a period of corresponding duration". Thus materials, fuel, and money or grain for paying wages are circulating capital, but buildings or machinery are fixed. Now the whole tendency of the change in methods of production is to increase the amount of fixed capital, and to employ more of it in a highly specialised form. The cultivator has very little fixed capital—most of it—his cattle—can be used to do almost any kind of work, and his few implements help to produce the means of satisfying almost all his wants. The artisan too uses little fixed capital, but it is more specialised. the tools of the brass-worker for instance are of little use except for working brass. In factories the use of fixed capital is very greatly increased. parts of it, such as the buildings and the engines, are not absolutely specialised because they could be used (to some extent at least) for production of a different kind to that for which the factory was designed; but most of the machines, as distinguished from the engines, are very highly specialised indeed, and will serve no purpose except that for which they were made. And the process goes even further, because as the factory-system develops, factories are set up to make machines for use in other factories. Thus in some parts of the world there are factories which make nothing but machine-looms—others may make nothing but spinning-machines: others make only machines for grinding grain or pressing oilseeds; and the machines used in these machine factories may be very specialised indeed.

Thus the tendency to specialisation exists in the case of all three factors of production. The same principle may be looked at in another way; the size of the self-supporting

economic groups increases progressively. At first we were concerned with the residents of only a single village, or group of villages, satisfying practically all their wants directly by their own produce. Then the area widens as the villages satisfy some of the wants of the town and the town satisfies some of the wants of the villages. The process of extension goes on until we must now regard the population of the whole civilised world as forming a single self-supporting group, since it can hardly be said of a single country that its products satisfy all the wants of its inhabitants. Even in an Indian village one now expects to find matches from Sweden or Norway or Japan, oil from Russia, or Burma or America, cloth made in England out of American cotton or Australian wool, articles of metal obtained from England, Spain, Malaysia and many other countries, glass from Belgium or Austria, and so on, and in an ordinary town one can find products of almost every country in the world on sale to satisfy Indian wants. And this is equally true of other countries, Englishmen satisfy their wants with the products of every country to a much larger extent than is the case in India, since even their food is very largely brought from abroad, and Indian products, such as tea and jute, are to be found in every country.

If the question is asked how this development has been brought about in India, the answer must be that, while many causes have contributed, the most important single factor has been the increase in means of communication both in India itself and between India and other countries. In India, first by roads and waterways, and then by railways; and outside India, first by the sailing ships of various European countries and then by steamships. The industry of transport, or moving goods, is itself productive, as has already been explained, and its development has rendered

possible the great increase in production that has taken place. Thus the most important as well as the most interesting parts of Indian economic history will be found to deal with the development of communications.

NOTE TO CHAPTER XVII.

Indian students cannot fail to notice the close connection that exists between the modern system of caste and the gradual specialisation of labour which has been pointed out in this chapter. The classical Hindu writings tell of three superior castes, the Brahman priests and administrators, the Rajput princes and warriors, and the Vaisnya merchants and traders; and they class the rest of the population as Sudras or as outcasts of mixed descent. But these lower classes are now found organised on a caste-system as strict as that of the superior classes of the people: they submit willingly to the same kind of restrictions regarding marriage, and each low caste has its own appropriate occupation. Further, a tendency is noticeable for castes to subdivide as their occupations subdivide, and instances of this subdivision can be found in various Census Reports. The history of the establishment of this system of castes coinciding with the division of occupations is not perfectly known, and in the absence of written records many points in it are likely to remain obscure; but it is reasonable to conjecture that the idea of *hereditary* occupation, which seems to be inherent in Indian ways of thinking, has counted for a good deal. In most countries the process of specialising occupations has gone on without producing a system of caste, because there was no particular reason why a son should follow his father's occupation, but in India a son 'naturally' follows his father's occupation, so that when a new specialised occupation comes into existence, it remains in the families of the men who first adopt it, and these families model their social relations on those of the already-existing castes with which they are familiar. So much at least is true that the ideas of caste and of occupation are very closely associated in Indian thought.

CHAPTER XVIII.

PRODUCTION CONCLUDING REMARKS.

BEFORE leaving the subject of Production a few words of caution are desirable. The study of economic history has led to the conclusion that the development of production passes through the same course in all countries where the facts have been examined, and it is reasonable to infer that India is no exception, and that the factory-system of production on a large scale, which has already established itself in some industries, must inevitably supersede the small-scale production which still prevails. But the inference, though it is reasonable, is not absolutely certain; the study of economic history is not complete, and it is not safe to draw absolute conclusions from it until more is known, in particular, of the development of economic processes in other parts of Asia. Nations are not alike in all respects, and it is possible that the factory-system may prove to be unsuited to Indian ways of living and of thinking, and that some other system of production may establish itself which suits the people better. Students should not therefore, at this early period of their studies, get the idea that production in India can develop in only one way, that large factories must increase, and that independent artisans must be superseded by large bodies of workmen receiving wages from employers. Students may think that, on the

known facts, this change is likely to occur, but they should not regard it as the only possible development in the future.

Further, students must be warned not to infer that the general establishment of the factory-system is necessarily a thing to be desired. We have pointed out in the first chapter that the science of Economics has nothing to do with praise or blame : it is concerned with what is happening and what is likely to happen. But economists, and also students, are human beings, and they can hardly help wishing to know whether a change which they foresee is good or bad ; while they may, as administrators, or as teachers, or as business-men, have to decide or advise at some time on the action to be taken in economic matters. Students have a long course before them, and they need not yet decide for themselves whether the general establishment of the factory-system would be for the benefit of the people of India as a whole : it is their duty, while they are students, to keep an open mind on this question, and it is in order to help them to keep an open mind that the following considerations are shortly stated here, though a much wider study of the subject is needed for their full appreciation.

The first consideration is that India is a very poor country. The people as a whole want a large increase in wealth to satisfy their most urgent wants : many of them need more nourishing food, better clothes, better houses, better health, better education, to name only a few of these wants . and any system of production that will give a large increase of wealth is desirable because it will give a chance of satisfying some of these most urgent wants. This consideration then is in favour of the factory-system, which certainly brings a large and rapid increase in the production of wealth , it

would be equally in favour of any other system which should produce the same result

The second consideration is that though more wealth may be produced by a change in the system of production, it does not follow that the new wealth will be available *for the people who want it most*; it may possibly be available chiefly for the richer classes, the landholders and merchants and employers, while the poorer classes may be little better off than they are now. Students will understand this consideration better when they have mastered the theory of the Distribution of Wealth, but they can see that a change in the system of Production may not be a great advantage for the people as a whole, if the advantage is enjoyed by only a small proportion of the people. And the force of this consideration is strengthened by the fact that in countries where the factory-system has developed the result is not entirely satisfactory. Some people think that the system of Distribution which has come into existence along with factory-production is so unsatisfactory that it would be well to change the system of production in order to secure a better distribution of the product; and in any case it has to be admitted that poverty has not been abolished by the increase of wealth. The study of the English writers on Economics during the nineteenth century is most instructive from this point of view, some of the earlier writers saw few or no drawbacks in the factory-system, which was then quite new; they recognised the great increase in wealth, and were confident that its distribution would be satisfactory. The same confidence is not found in the later writers, and the feeling of dissatisfaction often finds expression in the advocacy of large economic changes,—in proposals for Co-operation, Socialism, or Communism. Students will later on have to make themselves familiar

with the nature of these proposals, and with their advantages and their drawbacks : for the present what they have to do is to remember that the factory-system of production, and the distribution of wealth that has come into existence along with it, are not absolutely inevitable in India , and that a great deal of study and thought will have to be gone through before a useful opinion of their desirability can be found.

BOOK III.

CONSUMPTION.

CHAPTER XIX.

WANTS.

WE come now to consider the second main division of Economics, the Consumption of Wealth. Students will remember that (1) all wealth consists of desirable things, or things that people *want*, and (2) that wealth is consumed in satisfying wants ; but (3) that there are some wants which cannot be satisfied by wealth. The student of Economics is concerned directly with those wants only which can be satisfied by consuming wealth. He must leave out of his calculations those wants of human nature which wealth cannot satisfy, but it is most important for him to realise that when a man has to apply the conclusions of Economics to the practical affairs of life he must allow for these wants which the economist has left out of account ; the science does not deal with the whole of life, but only with a part of it, while the man who is dealing with practical affairs has to think of the whole. The science then cannot tell him all he wants to know ; it can tell him much about one side of life, but there are other sides of which it can tell him nothing.

But the part of life with which the science deals is large and important, as can be seen from a consideration of the wants that can be satisfied by wealth. Food, clothes, shelter, warmth and light, these things satisfy a very large

proportion of the wants of an ordinary man, and much the greatest share of his income is usually spent in obtaining them. Then there are the innumerable articles which meet his wants as conveniences ; all the things which he can buy in shops , the means of conveyance, or of amusement, which he can enjoy on payment , opportunities of education, or of medical treatment, and so on. And speaking generally, Economics is concerned with all the wants to satisfy which a man spends his income , or we may say that the economist is concerned with all the wants which a man can satisfy by spending money.

We cannot define Wants, except to say that they are a part of human nature , man as we know him feels certain wants, and exerts himself to satisfy them. And wants seem to differ so much among themselves that at first sight it looks as if no general statement could be made about them. As a matter of fact only a few general statements can be made, and consequently this division of the science can be explained more shortly than is possible in the case of Production, but the few general statements that can be made are of great importance, and their meaning must be clearly realised.

† The first point to be realised is that all wants are not felt as equally urgent , we may say that wants vary in intensity according to the individual, and according to his circumstances at the time the wants are felt. Very few people are in a position to satisfy all their wants, and the ordinary man has constantly to decide what wants he will satisfy and what wants he will endure, or in other words what things he will buy and what things he will do without . he buys the things of which he feels the want most intensely, and does without the others. Other people may think he has chosen unwisely, and at a different time he might make

a different choice ; but at the time he decides, the wants which he satisfies are felt by him more intensely than those which he endures. And so when a man is planning how to spend his income, he provides for the satisfaction of his various wants in the order of their intensity, as it appears to him at the moment. Intensity is not a quality of things that can be defined ; it is a state of feeling, that is, it is part of man's nature, and the economist has to take it into account accordingly.

2 The second point to realise is that almost every separate want can be completely satisfied if a man has enough money to pay for the satisfaction. This too is a matter of common knowledge, and students can verify it from their own experience. No want can be felt more intensely than the want of food or drink ; a man who is faint from hunger or thirst would give almost everything he possesses for a meal or a drink of water ; but when he has got these his want is satisfied for the time, and he wants no more food or water till he is hungry or thirsty again. Or again if a student wants a pair of shoes, or a particular book, or a tennis-bat, he can satisfy the want completely if he has the money to pay for the article in question.

3 If then each separate want is capable of being completely satisfied, it will be thought that a man can easily reach the condition where all his wants are satisfied and he wants nothing more. This condition is, however, rare ; human nature is such that wants constantly increase in number and variety, and new wants make themselves felt as existing wants are satisfied. This is the third general statement that can be made concerning wants ; like the others it is based on man's nature, and the economist has merely to accept it as a fact. A hungry man can be satisfied for the time by a meal of the coarsest food, perhaps a little

millet and pulse, but when a man is sure of getting such food he begins to want better food and a greater variety,—he wants wheat-flour instead of millet, he wants *ghī*, and vegetables, and rice, and perhaps fish, and he wants all sorts of spices and flavours. Then he wants the food better served, and he wants metal dishes and vessels instead of the earthen vessels which at first sufficed him. A man who wants clothes is satisfied at first by a coat and waist-cloth of the coarsest cotton cloth, when he has got these he wants finer cloth, then he wants a change of clothing, he wants shoes and a cap or turban. Then he begins to want a greater variety, warm woollen clothes for the winter and perhaps silk for the hot weather, special kinds of clothes for games or for riding or other pursuits, and so on. The young pleader may be only too glad to be able to go to court on an *ekka* or in a tramcar, but as he gets richer, he wants first a trap and horse of his own, then a carriage and pair, and then perhaps a motor-car. These are only a few obvious examples of what is almost an universal tendency, and students can supplement them readily by their own observations. They will see that most of the people they know are never completely satisfied, but become conscious of new wants as the old ones are met, and that they have no difficulty in disposing of the whole of their income, however much it may be increased.

But while the tendency for new wants to arise is almost universal, the rate at which this tendency operates differs greatly among people in different conditions of life; this is one of the chief distinctions that can be observed in examining the life of the inhabitants of India at the present day. In a village lying far from the railway we shall usually find that new wants arise slowly, and that some at least of the inhabitants may almost be described as 'satisfied,' that

is, they are not conscious of any intense, unsatisfied wants. Probably this condition was not uncommon when the villages were more nearly in what we have spoken of as the self-supporting stage ; it is now certainly less uncommon in the villages than in the towns, and among the villages it becomes less common as knowledge increases. The chief reason for this fact is that a want becomes much more clearly felt when the means of satisfying it are known ; as people's knowledge increases, they learn of new means of satisfaction, of which they have hitherto been ignorant, and they begin to want similar satisfaction for themselves. To take an illustration : before motor-cars were invented, even wealthy people were fairly satisfied with horses and carriages ; they might feel the want of better horses or more comfortable carriages, but they were not conscious of a want for an altogether different form of conveyance. But when motor-cars were invented, and a few of them appeared in India, people soon began to feel a want for them, a want that could not be satisfied by horses and carriages ; and whenever a motor-car was brought into a new district, the want made itself felt there, until now there are some motor-cars in most districts, and there are many people who feel the want of them but are unable to satisfy it.

This example illustrates the way in which new wants arise from increased knowledge ; knowledge is constantly increasing, not merely through education but through the extension of trade and of the practice of travelling that has followed on the construction of railways ; and it may be said that the rate at which wants multiply increases with the spread of knowledge. It is not likely, therefore, that the progress of the country will lead to a condition in which a larger proportion of the people are completely satisfied than is the case at present ; on the contrary, we must

expect that though people may be able to satisfy more and more wants, new wants will arise more and more quickly, so that there will always be unsatisfied wants.

As regards wants then, students should realise that for the ordinary man wants vary in intensity, and that each separate want can be satisfied, but that as old wants are satisfied new wants arise, so that it is very rare to find people with no unsatisfied wants, and the number of such people is more likely to decrease than to increase. In the next chapter we shall glance briefly at a few exceptions to these general statements.

CHAPTER XX.

WANTS (*Continued*). SOME EXCEPTIONS.

THE exceptions to the general principles regarding men's wants which are considered in this chapter are not of great direct importance for a preliminary account of Economics. It would be possible to leave them for consideration at a later stage, but it seems better to say a little about them now, partly because they will illustrate further the nature of wants, and partly because some of them may occur to students, and may appear to contradict what has been said above.

In the first place, there are cases where particular wants do not seem to be capable of satisfaction, so that the more a man has of a particular thing the more of it he wants. The love of display is one of these. Some people want above all things to make a display and impress other people by the magnificence of their houses, their clothes and jewels, their horses and carriages, and generally of their way of living ; they are always spending money on fresh objects of display, and never seem to be satisfied. This exception is apparent only, because the love of display is not exactly a simple want such as the want of food or clothing ; it is made up of a very large number of simple wants, and as each of these is satisfied new wants appear. At one time such a man will want to buy a fine carriage , having bought it, he is satisfied for the moment, but perhaps a few days

later he wants a motor-car, and so on. Or he buys an embroidered coat which satisfies him for the moment, but he soon gets tired of it, and buys a more expensive one. The case is therefore an illustration of the principle that new wants are constantly arising, rather than an exception to the rule that wants can be satisfied completely.

Another exception to this rule is the want of power. Some men want power over other men more than anything else, they will do anything to satisfy the want, but the more power they get, the more they want. This lust for power has been a common feature in the past history of India, at times when any successful officer of the Emperor might aspire to set up a kingdom for himself, and it accounts for many of the wars and rebellions that were then so common; it can no longer show itself in this way, but its working may still be observed in the social and political life of the country. This exception seems to be real, that is to say, the lust of some men for power cannot be satisfied. But such men are not ordinary men, and the economist is concerned with the wants of ordinary men.

Another exception of the same kind is the miser, that is, the man whose greatest pleasure is to accumulate material wealth, usually in the form of gold, or silver, or precious stones. He does not want wealth in order to spend it, or to secure power or position, or to make a display. He only wants the knowledge of his possessions, or sometimes to see and handle the coins or jewels, and the more he has of these the more he wants. This, however, is certainly not true of ordinary people. Misers are sometimes considered to be mad, and though we may not go so far as that, we must regard them as altogether exceptional. The economist therefore can disregard them, because he is concerned with ordinary people.

Next let us consider the case of men whose wants do not seem to increase in number and variety. The commonest case is that of the religious ascetic . probably most students have heard of wealthy men who have given up all the enjoyments of ordinary people and adopted a life of religious contemplation, perhaps even going so far as to depend on charity for their food. Such cases are not rare in India, though they cannot be described as ordinary , that is to say, the ordinary man does not adopt a religious way of life as a matter of course. What happens in this case is that a single want or group of wants—which can be satisfied only by certain religious experiences—becomes so intense that all, or almost all, other wants become unimportant in comparison. And this particular want is one of those which cannot be satisfied by wealth, and so is outside the economist's province. He knows of its existence, and he has to take note of the fact that the Production of wealth, as well as the Consumption, is diminished in a community where any considerable proportion of the members adopt a religious way of life ; but he cannot argue about the satisfaction of this particular want, because it cannot be satisfied in the same way as the wants with which he is concerned.¹

¹ At the present day the practice of adopting a purely religious way of life is probably much more common among the Hindus than among any other race or nation in the world, but it is by no means exclusively a Hindu practice . It prevailed very widely at one time among Buddhists of different nations, and also at various stages in the development of Christianity . Everyone knows that a considerable proportion of the Hindu ascetics are not genuine, that is that they are actuated by wants other than that of experiencing certain religious feelings , and this has been equally true at times in the case of other religions . The English monasteries for instance, before their suppression in the sixteenth century, had become of great economic importance, and the monks were largely occupied in the production of wealth, and in some cases consumed it freely in the satisfaction of the ordinary wants of human nature.

{ There are other similar cases where a particular want, which lies outside the science of Economics, is felt so intensely that the ordinary economic wants give way to it. There is, for instance, what may be called the want of self-expression, which may drive a man to write books, or paint pictures, or carve sculpture, not in order to live by selling his products, nor even for the fame which they will bring, but simply to satisfy the want which he feels. The economist cannot compare this want or other wants of the same nature with those which he discusses, though the fact of their existence is important to him.

{ The economist then has to allow for the fact that certain wants lie outside the limits of his science. He must recognise that these wants are often the noblest part of human nature, and that men who feel them most strongly will act differently from the ordinary people whose actions he is considering, but he also recognises that, as a matter of fact, these wants—though they may be felt more or less intensely—are not felt so strongly as to determine the actions of ordinary men in the ordinary affairs of life, and it is these ordinary affairs with which he is concerned. He cannot take these nobler wants directly into account, but he must recognise that their existence makes it likely that a certain proportion of persons will act in a different way from the majority, and thus, though he can draw conclusions as to the action of a community as a whole, he cannot apply those conclusions to every individual in the community, in fact he deals with ordinary men but has to remember that extraordinary men exist also.

{ Students will probably conclude from what has been said above that there is some lack of definiteness in the limits of the wants with which the economist deals. This is true. The science deals with a part of man's life only, and it is not

possible to cut up life into absolutely separate and independent divisions. The economist looks mainly at the ordinary material wants of an ordinary man, and at the ways in which they are satisfied. Here it is possible for him to draw fairly definite conclusions. But the word 'ordinary' itself does not provide a definite limit, but is a question of degree,¹ and different people will have different opinions as to the point where ordinary life ceases and extraordinary life begins. While therefore the main subject of Economics is clear, the exact limits of that subject cannot be stated with entire precision. It follows also, as has been pointed out more than once, that the economist's conclusions cannot be used directly as a guide to action; before using them as a guide, account must be taken of those parts of human nature which the economist has not considered.

A further limitation results from the fact that different communities are at any time in different stages, and that what is ordinary conduct in one community may not be ordinary in another. This fact causes practical difficulties when people living in one stage have to study books written in another stage. To take one obvious example, in England the idea that a judge could be bribed to give an unjust judgment is practically inconceivable, and economists writing only from knowledge of England might say that the integrity of a judge cannot possibly be measured in terms of money. India is gradually approaching to this stage, but even now cases sometimes occur where a judge takes bribes, and not very long ago the practice was common, that is to say, there were many judges who could estimate in money the intensity of their desire for integrity. At a later stage of progress the desire for integrity becomes so

¹ Compare the remarks on definitions and classification in Chapter IV.

great that no conceivable amount of money will give an equivalent satisfaction. An economist writing in India a century or so ago might have treated judges' desire for integrity as a motive that came within the scope of the science; it is one of the many proofs of the progress made by the country that he can no longer do so.

Students must then expect to meet difficulties regarding the exact limits of their science, and regarding the degree to which its conclusions can be applied directly to the affairs of life. Having said so much, we must leave these difficulties aside for the present and return to our consideration of the ordinary daily wants of ordinary men.

CHAPTER XXI.

NECESSARIES AND LUXURIES.

It is commonly said that when a man is deciding how to spend his income there are some wants which he will arrange to satisfy before he begins to think of providing for others, and the things needed to satisfy these wants are spoken of as Necessaries, while the other things which he wants are called Comforts or Luxuries. The distinction when stated in this way is not absolutely clear, and requires a little more examination. If we say a thing is necessary, we must mean that it is necessary *for some purpose*, and we can speak either of necessities for existence or of necessities for efficiency.

Necessaries for existence mean the things which a man must have in order to keep himself and his family alive. In cold countries the term includes, in addition to sufficient food and drink, a certain amount of clothing and also some sort of a house for shelter, in the plains of India the necessary amount of clothing and shelter is very small, and perhaps a blanket for the winter is all that a man absolutely requires, so that here the term necessities for existence means very little more than the small amount of grain and water that is sufficient to keep people alive. Necessaries for efficiency include more than this, everything, that is to say, which a man must consume in order to work

efficiently at his occupation, whatever it may be, and to educate his children up to the point where they can be expected to do as well as he has done. In India the term includes, first, considerably more food than is necessary for existence, secondly, a certain amount of clothing and furniture, and a healthy house for shelter, thirdly, opportunities for medical treatment, and for education for a man's children carried up to the stage which he himself has reached.

The difference between these two classes of necessities is very great. In India deaths from insufficient food are now so exceedingly rare, even in times of famine, that it may be said that the necessities for existence are within reach of the entire population, but on the other hand the poverty of the country is shown by the small proportion of the people who enjoy all the necessities for efficiency. Very large numbers, for instance, are unable to provide for education or medical treatment, while healthy dwelling-houses are rare, especially in the towns, a large proportion of the artisans and labourers, and even of the smaller cultivators, possess insufficient clothing for the cold weather, while in many parts of the country the food of the labourers is not sufficient to enable them to do a full day's work.

At the same time it must be recognised that many of these people, who do not consume the necessities for efficiency, spend a relatively large share of their income on things that cannot be described as necessary. This is the case in other countries besides India, and this class of expenditure is spoken of as *conventionally necessary*: the expenditure is not really necessary for the efficiency of the individual who incurs it, but he is forced to incur it by custom and by the power of public opinion. It is not possible to argue for instance that it is necessary for the efficiency of a

labourer that he should spend several months' income on entertainments in connection with a marriage or a death in the family, but if it is the custom, and his neighbours and caste-brothers expect him to do so, he will incur the expenditure and do without the necessities for efficiency which the money might otherwise have procured. And some students probably know of families among their own acquaintances which are insufficiently supplied with the necessities for efficiency, while the members manage to wear the style of clothing that is prescribed by the fashion of the time and place.

The ordinary man then will spend money on conventional necessities rather than on things that are really required for his own efficiency and for the education of his family, and the economist has to take account of this fact. We can imagine a generous employer, who is determined that all his workmen shall have all the necessities for efficiency, sitting down to calculate what wages he should pay to each of them in order to secure this, he would consider the quantity of good nourishing food, and its price, the amount and cost of clothing, furniture, house-rent, school-fees, doctors' fees and so on, and he would pay each man a sum sufficient to provide him with all he needed for himself and his family. But if the employer did not take conventional necessities into account, he would very soon find that the consumption of his workmen was not arranged in the way he expected. Some of them would be found eating inferior food, many of them would be living in unhealthy and badly-furnished houses, and their children would not be getting a suitable education, and if he enquired where the money had gone, he would probably find that most of it had been spent on these conventional necessities, that the workmen had borrowed money for marriage-feasts or other entertainments,

and were paying to their creditor the money that was meant to be spent in keeping themselves and their families healthy and efficient

The economist then, who considers things as they are, must allow for conventional necessities. The man who wants to improve the economic condition of the country must also recognise the facts, and when he has recognised them he must take such steps as are possible to persuade the people to reduce their expenditure on these conventional necessities, and to apply their income more wisely. That is to say, he must persuade people to change their customs. Students doubtless know that this attempt is being made at the present time by leading men in various Indian communities, and with a very varying measure of success. It is work that is well worth doing, but it is exceedingly difficult, and progress as a rule must be slow, because people in general, and Indians in particular, are afraid of setting up their personal opinion against that of the community to which they belong, and it is very hard to get enough people to act together in securing a change in custom

It is not only in connection with conventional necessities that the student of Economics is concerned with what is called habit, or custom, or fashion. all kinds of consumption are affected to a greater or less extent, and it is well to have a clear idea of what is meant by these expressions. In this case, again, we must start from the facts of human nature, and cannot attempt to give reasons for those facts. It is a fact, which students can verify from their own experience, that a man who has once done anything in a particular way tends to go on doing it in the same way rather than invent different ways of doing it; and the oftener he repeats the same method, the less likely

is he to change it. And it is also a fact that a man who has to do a thing for the first time tends to do it in the way he sees his neighbours doing it. Thus a man who lives entirely alone will develop habits or customs in all the ordinary actions of his life, in his ways of preparing and taking food, in his clothing and the way he puts it on, in the time at which he sleeps, and so on. But, as a rule, men do not live alone; and in ordinary life they follow the habits and customs of the people they see about them.

Many of our habits and customs are formed while we are young children; we do things in the way we see our parents and relatives doing them. And as we grow older we acquire fresh habits and customs from the people with whom we come in contact: a student on entering college models his conduct on that of the other students, a young man entering an office as clerk does what the other clerks do; and the same thing is true in the case of all occupations. The greater part, then, of an ordinary man's life consists of repeating actions which he has performed before, and imitating the actions of his neighbours.)

If all men did nothing else but repeat and imitate, no change could ever take place in the way of life of a community. This, of course, is not the case. Habits and customs and fashions change gradually as surrounding circumstances change: every now and then a man finds a new and more convenient way of doing a thing, and his example is followed by his neighbours until the new way has become a fashion and replaces the old. If we compare the life of a community this month with what it was last month, we shall as a rule find no visible difference in habits or fashions; but if we compare the life of to-day with the life of ten or twenty years ago, we find that many habits and fashions have changed in the longer interval.

Thus, changes in the habits and fashions of life take place gradually, and one of the greatest differences between different communities is the rate at which these changes take place. Some communities change their habits quickly: they are anxious to try any new ways of which they hear, and if the new ways seem better they adopt them quickly in place of the old ways. There are many examples of these progressive communities. The Americans change their habits and fashions perhaps most quickly of all; in some respects certainly they change them more quickly than Englishmen. Englishmen again change their habits and fashions more quickly than Indians; and among Indians, the Bengalis and such races as the kayasths of northern India change more quickly than most of the rajputs, or than cultivating classes such as the kurmis.

The rate of change depends in great measure on the opportunities for seeing and hearing of new ways. A village of illiterate cultivators, who stay at home almost all their lives, will change its habits and fashions much more slowly than a town where some of the people can read and write, where books and newspapers can be obtained, where new things are seen in the shops, and where strangers from other places come and go. The great increase in means of communication, which has already been mentioned as an influence on Production, has undoubtedly quickened the rate of change in Indian fashions and habits, even the villagers are affected, though less than the townspeople; and so far as can be foreseen the rate of change is bound to go on quickening. But at the present time the rate of change in India as a whole is slower than in most western countries, and consequently the influence of habit and custom and fashion on consumption is greater in India. This influence is seen in the expenditure on conventional

necessaries which has been discussed above, but it is exerted also in almost all kinds of consumption, except perhaps the actual necessities of existence. Thus, even where means of education are available, it sometimes takes a long time before villagers get into the habit of sending their children to school : a dispensary may exist for a long time before all the classes in its neighbourhood get into the habit of going there for treatment ; or people remain satisfied with the customary types of houses and the customary amount and kind of furniture when they have the money to supply themselves with healthier and more convenient accommodation.

We said at the beginning of this chapter that the things other than Necessaries which a man wants are spoken of as Comforts or Luxuries. There is no real distinction between the two terms. Both alike denote things that are not necessary for efficiency, but the ordinary use of the word Luxuries conveys an idea of blame which is not conveyed by Comforts ; that is to say, when we speak of a man spending his income on luxuries, we imply that in our opinion he is not spending his income wisely, while when we speak of Comforts we imply that the expenditure is more or less justifiable. And in ordinary practice the use of these words depends largely on the amount of income enjoyed by the person whose expenditure is being considered. Thus, we would speak of summer clothes made of silk as a Comfort for a pleader or a merchant or a government official ; but we should call them a Luxury in the case of a cultivator, or a servant, or a labourer. Or a carriage may be called a Comfort for an elderly landholder, while it would be called a Luxury in the case of a man in a more humble position. The distinction then is unimportant for the science of Economics, and it is explained here only

because students will find the words used in their later reading on the subject Both words alike denote things which, while they are not necessary for the consumer's efficiency, are capable of satisfying wants which he experiences.

CHAPTER XXII.

THE DEMAND OF AN INDIVIDUAL CONSUMER.

WE have now indicated in general terms the nature of the wants with which the science of Economics is concerned, and must turn to the way in which men try to satisfy those wants. For the ordinary man this is a question of how to spend his income, however it may be obtained ; ultimately, of course, the question concerns the production of wealth as well as its consumption, because men produce, that is, earn an income, in order to consume ; but for the present we start with the fact that every man has an income, whether it consists of grain and other things with which he can satisfy his wants directly, or whether it consists of money with which he can purchase the things he needs. The ordinary man has an income which suffices to satisfy some, but not all, of his wants, and his object is to spend it in such a way as to get the greatest possible amount of pleasure and satisfaction.

We will introduce here two words which are commonly used in Economics. One of these is Commodity, it means simply a material thing that can satisfy a want, and does not bring any new idea into the subject. It is used mainly because the word 'thing' is somewhat indefinite, and a word is wanted which will convey a clear meaning ; we shall use it in future in the sense which we have just explained.

The second word is *Utility* : it is convenient to make use of this word to signify the amount of pleasure or satisfaction which is obtained by consumption. The use of this word also does not introduce any new idea ; it is simply a convenient term to use for the qualities of things which yield pleasure or satisfaction, that is, which satisfy wants in the course of their consumption ; and it follows naturally from what was said in Chapter III as to the nature of consumption. Man does not consume the matter of which a thing consists, his consumption leaves the amount of matter unchanged but leaves it in a less useful form, that is, he can be said to consume the utility possessed by an aggregate of matter, though he cannot be said to consume the matter itself. Nor does the word utility imply any praise or any blame as regards consumption, it is true that when in common language we use words like useful, or utility, we are thinking of some purpose to be served ; but when the economist uses these words the only purpose which he has in mind is the satisfaction of wants, and for him a commodity is useful if it satisfies a want and not otherwise.

Making use of the word utility, we can describe a man's object in spending his income as an endeavour to obtain the greatest possible amount of utility. In order to plan expenditure that will obtain the maximum of utility, a man has to compare the intensity of his different wants and decide which of them he can satisfy and whether he can satisfy them completely or not. This process is fundamentally the same in all cases, but the choice to be made by different men differs so much that the identity is not always apparent. For the labourer who earns, say, two annas by his day's work the process is simple. Very nearly the whole of his income goes to buy food for himself and his family, and the quality of the food is largely

a matter of custom so long as prices do not change ; he has to consider how much food he can buy, and in what other ways he can spend the two or three pice that may be left after providing for his food ; and he has to decide what will give him the greatest amount of utility, a few more chatáks of grain, or a little tobacco, or some other luxury, or the saving up of the pice towards buying clothes or something else that he will want later on. In the same way the man who has twenty or thirty rupees a month to spend finds that most of his expenditure is settled for him, so long as prices do not change greatly, and so long as his way of living does not alter. After he has provided for rent, and for food, and other regular expenditure, there are perhaps a few rupees left and he has to decide how to get the maximum of utility out of these ; whether to buy a little more of some luxury, or spend the money on clothes or something else, or again save it up for future use. So with the wealthy landholder, or pleader or merchant, though his income is much larger he finds that most of it is needed for his regular expenditure, and that he has only to think over the disposal of what is left of it.

Whether then a man's income is stated in pice, or annas, or rupees, or even in lakhs, most of it is spent as a matter of course on commodities required for the way of life to which he is accustomed, but there is usually a balance or margin, the disposal of which has to be settled from time to time, and it is in settling the disposal of this margin that a man is really trying to secure a maximum of utility, whether or not he thinks of what he is doing. Some men have to think whether it is best to buy just a little more grain : some men are hesitating whether to buy a few chatáks more *ghí* ; others may be doubtful whether to keep another horse, or to get a motor-car ; but in all cases the object is the same

to secure the greatest possible amount of utility, and as a rule the form that the questions take is : Shall I buy a little more of this commodity, or of that ? which will give the larger amount of utility in consumption ? In other words, people in ordinary times are concerned mainly with the limit of quantity of various commodities, up to which they shall carry their consumption

Now let us take a concrete instance of a question of this kind, and see how the ordinary man answers it. Let us suppose that a man is planning his expenditure for the month and wishes to settle just how much *ghi* shall be bought for his household. The first thing to find out is clearly the price at which *ghi* can be bought, and we will take it to be one ser per rupee. He calculates that the household would really like to use ten sers in a month, but he is quite sure that he cannot spend so much as ten rupees on *ghi*, because the money is wanted more urgently for other things. He is satisfied on the other hand that he can afford to buy four sers, so that the family can have some *ghi* though not so much as they would like. Can he afford one ser more ? It will cost him a rupee, and there are many other things which he wants, the utility of which he has to compare with the utility of the fifth ser of *ghi*. If there are several people with the same income in this position, we can be pretty certain that they will decide the question in different ways. Some will think that it is just worth their while to buy the fifth ser, while others will decide that the money is more urgently wanted for something else. We will suppose that the man whom we are considering decides after some hesitation that it is just worth his while to buy the fifth ser, but that he certainly cannot buy any more. The consumption of his family for that month is then fixed at five sers of *ghi*, and in the same way the consumption of

other commodities is settled until the whole of his income is accounted for

Ordinary people have not as a rule any clear idea regarding the quantity of a commodity which they would buy if its price were to change very greatly, but when a large change in price comes, they have to consider the question, and decide on the amount to be bought at a price materially different from that to which they have been accustomed. It is possible that the price of *ghi*, to continue the same illustration, might rise so high that the consumer would have to give up its regular use, and either buy none at all or only buy a few *chatáks* for use on a feast-day; it is also possible that the price might fall so low that he could buy all he wanted without difficulty; but between these two extreme limits, whatever the price might be, he would have to decide how much *ghi* to buy. If we suppose that he is a man of judgment and experience, he could make out a table or schedule, showing the quantity which he would buy at each price, if we follow the assumptions that have already been made, the schedule would be something like this :

When a ser costs 6 rupees or more, he would buy no *ghi*

"	"	"	4-0 rupees,	he would buy 1 ser.
"	"	"	2-0 "	" , 3 "
"	"	"	1-4 "	" " 4 "
"	"	"	1-0 "	" " 5 "
"	"	"	12 annas	" " 6 "
"	"	"	8 "	" " 8 "
"	"	"	4 " or less	" " 10 "

These figures are, of course, imaginary, and are given only as an illustration of the way in which the amount a consumer purchases varies with the price which he has to pay. When the price of a commodity is very high relatively to his income, he consumes none of the commodity, or at most

buys a very small quantity occasionally, at a lower range of prices, he may take the commodity into regular use, and he will increase his consumption as the price falls, until he can satisfy his want completely, then he will buy no more, however low the price may fall.

A schedule such as that which we have given may be called a Demand Schedule. It indicates the amount of a commodity which the consumer is prepared to buy at any given price, and that amount is commonly spoken of as his Demand at that price. It is not easy to prepare such a schedule accurately, because as we have said above, the ordinary consumer cannot foresee what his Demand will be at a price greatly different from that to which he is accustomed, but students will find that the meaning of the terms we have used will become much plainer if they try to prepare for themselves Demand Schedules of a few of the commodities which they, or their families, are accustomed to buy. To prepare such a schedule the student should begin with the current price, and set down opposite it the quantity of the commodity which he bought last week, or last month, at that price; he should then vary the price gradually, first raising it and then lowering it, and set down opposite each entry of price the amount that he thinks he could afford, assuming that his income is unchanged, and that the prices of his other articles of consumption are also unchanged. As he raises the price, he will finally come to the point where he decides that he would have to give up the commodity, and as he lowers the price he will come to the point where he can get all he wants, these points give the limits to his schedule, and between those limits he will have the quantities which he thinks he could afford at each price.

CHAPTER XXIII.

CHANGES IN A CONSUMER'S DEMAND

WE have assumed in the last chapter that the consumer has to think of only a single commodity at a time, and we have assumed also that his income is unchanged. In real life a man's position is seldom so simple as this. In the first place, the prices of commodities are constantly changing, and the consumer has to take all these changes into account and fix the amount of his purchases accordingly. (Usually some things will be rather cheaper, and other things rather dearer than before, and he will buy a little more of what is cheaper and a little less of what is dearer, but his decision in each case is based on the same consideration, the endeavour to obtain the greatest possible amount of utility in return for the money which he is able to spend. The economist does not assume that every consumer succeeds in this endeavour, men often make mistakes and fail to get the maximum of utility, but the fact of importance is that they try to get it, and a man's actual consumption is determined by his own idea of utility and not by the ideas of other people. At present we are concerned with the facts of consumption, and not with schemes for showing people what they should consume.

When a man's income is changed, the problem before him becomes more complex because he has usually to make some

changes in his customary way of life, and so less of his expenditure is determined by custom. If we suppose a man's income to be reduced by one-half, we can see that his way of life will have to be changed almost entirely—he must as a rule go to live in a smaller house, get rid of some of his servants, be content with cheaper food and clothes, walk where he was accustomed to drive, and do without many things that he has hitherto consumed almost as a matter of course. Let us see how a sudden reduction of income would affect his Demand Schedule for a particular commodity. If we take the schedule given as an illustration in the last chapter, we may be sure that at the present price of one rupee he will buy less *ghr* than when his income was larger, —perhaps only two sers instead of five—he still wants as much *ghr* as before, but he can no longer spare the same amount of money for it because he has less money to spend. Again, it is fairly certain that he would now have to give up *ghr* altogether at a lower price than when his income was larger, and that he will not be able to satisfy his want completely at the price where he could have done so with a larger income. Thus his Demand Schedule will have the same general form as before, but it will be lower throughout, that is to say, at any given price he will buy less *ghr* than before. The figures would compare somewhat as follows :

Price	Former demand	Present demand
Rs 6 a ser	nil	nil
„ 4 „	1 ser	nil
„ 2 „	3 „	1 ser.
„ 1-4 „	4 „	1½ „
„ 1 0 „	5 „	2 „
As 12 „	6 „	2½ „
„ 8 „	8 „	3½ „
„ 4 „	10 „	6 „
„ 2 „	10 „	10 „

The same sort of change would have to be made in his Demand Schedule for all the commodities which he still uses, and in this way his reduced income would be distributed so as to secure him as much utility as is possible in his altered circumstances. On the other hand, if his income were largely increased, the changes in his Demand Schedules would be in exactly the opposite direction ; he would now be able to satisfy his want completely at a rather higher price for each commodity, he would continue consumption at prices where with a lower income he would have had to give it up, and between these limits he would be able to buy rather more than before at any particular price. His Demand Schedules would be raised throughout.

When a large change of income takes place suddenly, a man usually alters his way of life, and for the time being he has few habits to aid him in settling his expenditure ; but he copies the habits of his neighbours, and the new way of life very soon becomes habitual, and then (as before) much of his expenditure is regularly incurred, and he has to think mainly of the point up to which he shall carry his consumption of particular commodities. His position then is just the same as before, except that the Demand Schedules have been raised or lowered as the case may be,—raised if his income has increased, and lowered if it has been diminished. Where the change of income is gradual, as in the case of a pleader whose practice is improving, or of an official whose pay rises by small periodical increments, the changes in Demand Schedules are also gradual, the consumer's way of life is not changed suddenly, but the result in the long run is the same.

Students will see then that the figures in a man's Demand Schedule must necessarily change with each change in his income, but that the general form of the schedule does not

change ; in every case there is an upper limit and a lower limit, and between these limits the quantity demanded increases as the price falls and diminishes as the price rises

The relation between Wants and Demand will be apparent from what has been said above. A man feels a Want, and that is all that can be said about it, his Demand for a commodity to satisfy the Want varies with the price of the commodity in the way that has been explained. A coolie probably wants *ghr* for his everyday food, but his Demand for it does not interest the sellers of *ghr*, because he would only buy it at a price very much lower than that which prevails. If however the price of *ghr* were to fall so much that the coolie could buy some of it every day, then his Demand would become effective, and it would then interest the dealers. On the other hand, as the price of *ghr* rises, it may become in excess of the upper limit of the schedules of many consumers, and as they give up its use, their Demand for it ceases to be effective. To take an extreme case, if the price were to rise so much that *ghr* could only be bought for its weight in gold, there would be very few purchasers left in India, the price would be so high that no ordinary person would think of making a purchase, and *ghr* would be bought only by one or two men in any city, who might be willing to buy small quantities for use on special occasions. Ordinary people would continue to want as much *ghr* as before but they could not possibly demand it at that price.

CHAPTER XXIV.

DEMAND OF A COMMUNITY.

So far we have spoken of the wants and the demand of individual persons. The student must know first the nature of these, because communities are made up of individuals, and the demand of a community is made up of the demand of the individuals whom it comprises; but he must also know the nature of the demand of a community, because the science deals with communities rather than individuals.

If nearly all the members of a community enjoy about the same income and live in the same style, then a Demand Schedule drawn up for an ordinary individual of the community will represent with fair accuracy the demand of the community if the quantities shown in it are multiplied by the numbers of the community. For instance, if we know that an ordinary student demands two sers of *ghi* when the price is one rupee, and if there are 1000 students at the college, all living in the same way and spending about the same amount of money, then the demand of this community of students at this price would be just about 2000 sers. It is true that the community would include some students who consume rather less *ghi* than the ordinary student, but it is also true that there would be others who consume rather more, and the excess of consumption of these will, as a matter of fact, just about make good the deficient con-

sumption of the others, so that the consumption will be just about the same as if all the students consumed exactly the same amount. This is equally true of the consumption at other prices, so that in a homogeneous community (that is, one where the incomes of individuals and their ways of life do not differ greatly) the demand of the community is directly proportional to its numbers and can be accurately represented by a schedule drawn up for any ordinary individual.

Where the community is not homogeneous, a little adjustment is required in order to prepare a schedule that will show the Demand of the whole. To make such a schedule it would be necessary first to prepare schedules for each of the different classes of which the community is comprised, and then to combine them. In an ordinary Indian town, for instance, we should have to prepare schedules of demand, first for the large class of families whose income is from six to eight rupees, then for the class whose income is between ten and fifteen rupees, then for the class of from twenty to thirty rupees, and so on; and if we knew approximately the number of families contained in each class we could calculate the total demand at each price for the entire population of the town. The preparation of such schedules would require a considerable knowledge of statistics and also some judgment in their use, as students will find when they come to study statistics, but the important point is that such a schedule, though it would be longer, would be of precisely the same type as the schedule for an ordinary individual. For any commodity there would be a limit of price so high that no one in the town would think of buying any of it, if there are very rich men living in the town, this limit might be very high as we saw in the last chapter, but it

would exist. And in the same way there would be a limit so low that even the poorest classes could satisfy their wants completely, though it would be a very low limit indeed. And between these limits there would be the fact already noticed that the demand would increase as the price falls, and would decrease as the price rises.

This in fact is the general Law of Demand, and it is true of very nearly every commodity and very nearly every community, a rise in price diminishes demand, and a fall in price increases demand. This law has sometimes been stated in such a way as to lead people to think that the relation between price and demand is proportional, in the arithmetical sense of the word, that is to say, that if the price is doubled, the quantity demanded would be reduced to one-half, and so on. It is certainly not the case that any general statement can be made as to the proportion in the case of all commodities and all communities, enough is not yet known of the facts of consumption to enable us to make statements as to the proportion in the case of particular commodities, and this is a line of study which ought to yield valuable results to Indian economists, who have the advantage of more extensive statistical information than many countries enjoy, especially in the octroi returns of a large number of towns and cities. Further study then may make it possible to deduce laws regarding the proportionate variation of demand and price in the case of some classes of commodities, which would be a valuable addition to the science; but at present the Law of Demand can only indicate that demand will rise or fall, and cannot indicate by how much it is likely to change in the case of any particular commodity.

Like other economic laws, the Law of Demand is not entirely without exceptions, but they are rare and of little

practical importance. One exception is found in the case of commodities which have little or no utility except their rarity. At present people pay very high prices for diamonds because they are very scarce and the ownership of them gives distinction; but if diamonds were to be sold at the price of glass it is probable that very few people would buy them at all, so that in this case it is not certain that a very large fall in price would be followed by an increase in demand. On the other hand it is possible that if diamonds could be bought by the serf or the peasant, some new utility would be found in them, that is to say, they might be found useful in satisfying some want other than the desire for rarity, and in that case the demand might be largely increased. There are also possible cases where a rise in price may be followed by increased demand. In a famine, for instance, the prices of all food-grains rise very high; many people who in ordinary times eat wheat-flour are then unable to buy it and buy coarser and cheaper grains such as millets or barley instead, and the demand for these may thus increase when the prices rise. Students will find it instructive to see if they can think of other exceptions to the general law; they will not be able to discover many, but the attempt to do so will give them a definite idea of the extent to which the Law itself is true in ordinary life.

The exception last mentioned leads us to a point which requires a short notice in order to make the account of demand correspond more accurately with actual facts. It is rare to find that a particular want can be satisfied only by a particular commodity; as a rule there are several commodities, any one of which will satisfy the want, and the use of one of these rather than the others is partly a question of price and partly also a matter of habit and custom. Thus in the case just given the want of food can

be satisfied by the use of barley or millets as well as by the use of wheat ; and in the same way various vegetable oils can take the place of *ghi*. People in a certain position are accustomed to use wheat and *ghi*, and they keep to these as long as they can ; but when prices rise greatly they may find themselves forced to use the cheaper substitutes. Many persons again are accustomed to drink spirits to satisfy their want for stimulation ; but when spirits are hard to get and very expensive, some consumers will use other stimulants instead, possibly opium, or drugs prepared from hemp or other plants, or on the other hand tea or coffee. The effect of this principle is to modify the figures in a Demand Schedule for any particular commodity, but not to change the shape of the schedule itself. The extent of its practical importance varies greatly among different communities. In those where the force of custom is strong, people satisfy their wants as long as possible in the way to which they are accustomed, while in others they are much readier to change their ways, and are even in some cases anxious to try every new way of satisfying an old want. Thus whenever we attempt to study the consumption of any particular commodity, we have to consider both the other commodities which can take its place, and the rapidity with which customs change in the communities which are being studied. This side of the question is often overlooked in actual life. Students have no doubt heard or read of the enthusiastic temperance reformers who endeavour to stop the consumption of spirits in some communities. Some of them are apt to think that their object could be achieved at once if the manufacture and sale of spirits were stopped, and they look to the government to do this. But experience in India, as well as in other countries, shows that this course will not prevent

people from wanting stimulants ; so long as they want stimulants, they will consume the stimulants they can get, and if they cannot get spirits they will take some of the very dangerous drugs that will satisfy their want. The men who wish to effect a change in consumption (whether of spirits or of any other commodity) must attain their object mainly through the consumers , that is to say, they must persuade the consumers to leave the particular want unsatisfied, or to satisfy it in ways that are not open to objection. Wants such as the want of stimulants are very largely the result of custom and fashion, and, as we have seen, people can be persuaded to change their customs and fashions, and then the want will be no longer felt or will be felt much less intensely. The question of temperance reform is one of great importance, but it cannot be discussed fully without a wide knowledge both of Economics and of other sciences that deal with human life , it is mentioned here merely as an illustration of the kind of problem that has to be considered in connection with consumption and demand.

In showing how an individual's demand for a commodity could be set out in the form of a schedule, we had to confine our attention to such commodities as are bought regularly in small quantities. It is not possible to make out a schedule of an ordinary individual's demand for commodities which he only buys occasionally and which last for a long time , we cannot, for instance, set out in this way an individual student's demand for shoes, or tennis bats, or watches, or bicycles. But in the case of a community, it is possible to make out schedules for such commodities if the community be large enough. Thus in a college of 1000 students, there are always some students who are thinking of buying new shoes, or new tennis bats, but doubting whether the utility to be obtained is worth the price. If the price falls, some

of these will decide to purchase, and the lower the price the more purchases will be made, while if the price rises, the purchases will be fewer, as some students will decide to wear their old shoes longer or to do without a tennis bat. It is almost impossible to get enough information to enable us to prepare complete Demand Schedules in such cases, but we can see that the schedules must be of the same general shape as those for commodities like *ghi*, and that the Law of Demand applies equally in their case. Again, in a town of 10,000 inhabitants, the number of people who on any given day are thinking of buying bicycles is probably so small that no definite statement could be made as to the number that would be sold at different prices, and the price might rise or fall largely without making much change in the number sold; but in a city with several lakhs of inhabitants, the number of possible buyers may be so large that every change in price will affect the number sold, just as every change in price affects the sale of *ghi*. The Law of Demand thus holds for all classes of commodities (subject to a few exceptions already dealt with) in every community where actual or possible purchasers of the commodity are to be found in considerable numbers, and the larger the number of purchasers the more closely will the Demand vary with every change in price.

BOOK IV.

DEMAND AND SUPPLY.

CHAPTER XXV.

PRELIMINARY CONSIDERATIONS.

WE have now discussed the conditions under which wealth is produced and consumed ; in the present Book we have to see in what way the production of particular commodities is adjusted so as to provide the amount required for consumption. This adjustment is usually spoken of as the Equilibrium of Demand and Supply. Demand as we have seen means the quantity of a commodity demanded, and it varies according to the price at which the commodity can be bought . Supply means the quantity of a commodity offered for sale, and as we shall see later on this quantity also varies with the price. The quantity of a commodity offered for sale must depend in the long run on the quantity produced, and so the terms Supply and Production are closely connected together and refer to the sellers, just as Demand and Consumption are closely connected together and refer to the purchasers . Equilibrium means literally even-balancing, and the word can be applied to scales in which things are weighed, when the two sides balance evenly , for our present purpose the word indicates that the Demand and the Supply balance, that is that they are equal

Stated in a concrete form, the question for consideration is this . How does it come about that a particular quantity of wheat, or *ghn*, or cotton cloth, or a particular number

of watches, or bicycles, or pairs of shoes, or any other commodity, is produced and sold at a particular price? In what way is the quantity or number determined, and how is the price fixed? The answer to this question is the central part of the science of Economics

Students will notice that there appear to be two questions, and not one. there is the question of quantity or number, and there is the question of price. One of the chief difficulties in Economics arises from the fact that it is not possible to treat these two questions separately, and to say either that Supply and Demand determine Price, or that Price determines Supply and Demand. As we shall see more clearly later on, these three things are interdependent, and a change in any one of them is likely to lead to changes in the other two. a fall in price usually leads to a reduction in the quantity offered and to an increase in the quantity demanded. an increase in the quantity offered usually leads to a fall in price and to an increase in the quantity demanded, an increase in the quantity demanded usually leads to a rise in price and an increase in the quantity supplied. We are compelled, therefore, to treat the two questions together; and when we are for the moment looking at a change in one of the three quantities, we must bear in mind that all the three quantities are liable to change, and that any change in one is both a cause and a consequence of changes in the others.

So far as the earliest stages of production are concerned, there is little difficulty in answering the question that is now before us. To take the simplest possible case, we may consider men living in a forest who get their food by picking fruit from the trees. A man starts out very hungry, that is to say his want for food is intense: he goes through the forest picking fruit and eating it as he goes; as he eats,

his want for food gets less intense, and at the same time he begins to get tired with the effort of walking and of reaching or climbing for the fruit. If there is plenty of fruit close at hand, he will satisfy his want completely before he gets tired; but if the fruit-trees are far apart and the fruit is difficult to reach, he may get tired of the exertion before he has had a full meal, and he has to decide to bear either the unpleasantness of further fatigue, or the unpleasantness of the unsatisfied want of food. The want of food grows less as he eats, that is to say the utility to him of more fruit becomes steadily less, and at the same time the unpleasantness of fatigue becomes steadily greater. Or we may describe the unpleasantness of fatigue as the want of rest, and say that while the utility of food is decreasing the utility of rest is increasing. Sooner or later then he will want rest more than food, and will lie down and go to sleep. In this case the man balances, one against the other, the utility of food and the utility of rest; when he is very hungry, that is when the utility of food to him is very great, the utility of rest is negligible in comparison; but as time goes on, the two become more nearly balanced, and at last the utility of rest becomes the greater.

In the early stages of production then, when men are producing for their own consumption, and think neither of selling nor of buying, they balance the utility of the commodities produced against the efforts and unpleasantness required to produce them. With plenty of fertile land and good cattle, a cultivator may produce all that his family wants, without excessive effort on his part; but if his holding is small, or his land is poor, or his cattle are weak, he may decide that it is best to leave some of his wants partially unsatisfied, because the extra effort required to satisfy them completely is not worth his while.

It is sometimes convenient to have a single word to denote the efforts and unpleasantness involved in the processes of production these are, as we have seen, just the opposite of Utility, and if we speak of them as Dis-utility, then we may say that the cultivator balances the utility of the things produced against the dis-utility of producing them, and carries his production up to the point where the dis-utility involved becomes as great as the utility.

The matter becomes more complicated when we pass to the later stages of production, in which men buy most or all of what they consume, and sell most or all of what they produce In this case, as we have seen in the last Book, the purchaser balances the utility of the commodity, not against the dis-utility of producing it, but against the price that he has to pay, and we have now to take up the consideration of the seller's part in the transaction. Before, however, we enter on this, we must understand the meaning of the word Market, which we shall have to use frequently in the following chapters. In every-day language, the word is used in at least two meanings. The most familiar of these in India is probably the meaning which it bears in municipalities, in this sense a market is a building or enclosure where several kinds of provisions and other goods are offered for sale under conditions regulated by the municipality This is not the kind of market with which we are concerned The other meaning of the word is indicated in such terms as the stock-market, or the wheat-market, or the rice-market, which may be seen in the commercial columns of the newspapers, and these markets approach closely to what the economist means by a market We may define a Market for any commodity as a place or region where buyers and sellers of it are in free intercourse with one another The buyers and sellers may all be in one

place, as in the grain-market or the cotton-market of an up-country town ; but this is not a necessary condition, if the postal and telegraphic facilities are such that people can maintain free intercourse while living at a distance. Thus, almost the whole of northern India forms one stock and share market, with its centre in Calcutta, and people in Lucknow or Cawnpore or Delhi or Lahore, who want to buy stocks or shares, carry out their transactions in Calcutta with the aid of the post or telegraph.

In order, however, to study the conditions that prevail in a market, it is best to devote attention in the first place to one where the buyers and sellers meet in one place : such markets are to be found in all Indian towns of any importance, and they deal in commodities such as grain, or cotton, or sugar, which are produced in the locality. There are numerous traders who have their places of business close together ; at any given time some of these want to buy the particular commodity dealt with in the market and others want to sell ; and the same trader will sometimes be a seller and at other times a buyer of the same thing. Traders, whether they are sellers or buyers, have to think of a large number of factors even in a small market : sellers want to know the buyers' Demand, that is the quantity which will be bought at each price ; buyers want to know the sellers' Supply, that is the quantity that will be offered for sale at each price ; each seller wants to know the position of the other sellers, and each buyer wants to know the position of the other buyers, all alike want to know whether prices are going to be higher or lower in the near future, whether the consumers' demand is likely to increase or diminish, and what is the prospect of an increased or reduced supply. Even a small market then is a complicated organisation ; and when the same commodity is

dealt with in various markets, and can be brought from one to the other, the complication may become very great. A dealer in wheat in Cawnpore, for instance, must know as much as possible not only of the position in the Cawnpore market, but also of the other large markets in India, he must think of Delhi, and Hathras, and Calcutta, and Bombay, and Karachi. And, further, he must think about other countries, so that an up-country trader in India sometimes wants to know the attitude of traders in London, and Liverpool, and New York and Chicago. We must, therefore, approach the study of a market by degrees, taking first very simple cases, and gradually introducing new considerations until we can form an idea of the working of an actual market.

There are, however, two points which are common to all markets. In the first place, sellers want to get the highest possible price, and buyers want the lowest possible price, no trader will sell wheat at three rupees a maund if there is a buyer present who will give three rupees and one anna, and no buyer will give three rupees if there is a trader ready to sell at two rupees and fifteen annas. The buyer then wants to know the prices that all sellers are asking, and the seller wants to know the prices that all buyers are offering. The second point follows from the first; at any one moment there can be only one price at which sales actually take place, though that price may change frequently even in the course of a single day. A seller must know not only what buyers are offering, but what other sellers are asking, because it is no use for him to ask a higher price than others ask, and in the same way a buyer must know what other buyers are offering, because it is no use for him to offer less. We have now to see how such a market will settle on a particular price.

CHAPTER XXVI.

TEMPORARY OR MARKET EQUILIBRIUM.

WE must begin this study of equilibrium in a market with a simple case, and we will take a market for wheat lying so far from the railway that wheat does not reach it from a distance, and that export is not practised. We will assume also that cultivators do not bring their own wheat to market, but sell it to traders in their village, and that these traders are the sellers in the market; the buyers are the shopkeepers, who will sell it retail to consumers in the town. Markets of this type were formerly common in India, and they are still to be found, though the construction of railways has now made most of them largely dependent on import or export. We will also suppose that there is no combination between sellers on the one hand or buyers on the other, but that each individual is buying, or selling, independently and for his own interest. Let us consider the working of such a market early in December, in a season when the next crop of wheat has been sown on about the usual area and the crop has made a fairly good start, so that there are no unusual circumstances to take into account. On the morning of the market-day the traders will come in from the villages with carts or pack-animals carrying the quantity of grain which they think they can sell. They know (and the shopkeepers know too)

that on the last market-day the price was three rupees a maund, and they know by experience that at this price about 2000 maunds are usually sold, this being what the town will require for a week's consumption. Each seller tries to keep his own affairs a secret, but the other sellers, and also the buyers, know in a general way whether he is anxious to sell much or little; and it is known that the total stock in the traders' possession will supply 2000 maunds a week till harvest and leave a small surplus in hand when the new crop is ready. When the market opens, the shopkeepers go round asking the price of the various traders, but at first making no purchases; at the same time they estimate the amount that has been brought for sale, and see if any particular dealer appears anxious to sell or has brought an unusually small or large quantity of wheat. The traders are at the same time seeing what other traders have brought, and are trying to find out if any of the shopkeepers are unusually anxious to buy. We will suppose that on this market-day the stock for sale is about 2000 maunds, and that no one is specially anxious either to sell or to buy. After some time spent in examining the position, and in making offers at different rates, both sides will realise that there is no hope of the price being altered in their favour, and first one and then another shopkeeper will make his purchases at the existing rate, until by the afternoon the whole stock is sold off.

This is the simplest possible case of equilibrium, there are about 2000 maunds for sale at three rupees, and the demand at that price is just about the same as the supply, the whole quantity is therefore sold at that price. Now let us suppose that on the next market-day the traders bring in about 2000 maunds as before. But this time they notice that some of the buyers are anxious to buy quickly at this

price ; they do not know of a reason, but they infer that for some reason or other more wheat is wanted for consumption, and they raise their price by two annas a maund. At this price perhaps none of the shopkeepers will buy, then one or two of the traders ask three rupees one anna, and at this price transactions begin to take place, some shopkeepers buying and others still holding aloof in the hope that the price will again fall. As the day goes on the market gets to know that a large body of troops is shortly coming to the neighbourhood for training, and that this was the reason why some shopkeepers were anxious to buy, because they knew that the demand for wheat for consumption would be increased by the presence of the troops. The shopkeepers who did not know this, and have so far made no purchases, now become anxious, as they see that a good deal of the stock has been sold, and they begin to offer three rupees one anna, but the traders will see their anxiety to buy, and will again raise the price for the wheat they have left. Some shopkeepers will now reduce their purchases and buy less grain than they intended. the price will probably fluctuate for a time, sometimes rising and sometimes falling, according as the remaining shopkeepers press forward to buy or hold off for a time, and by the evening the entire stock will have been sold, at prices somewhat higher than those that prevailed on the previous market-day.

Next, let us watch the market early in January, supposing that there has been good rain at the end of December, and that the new wheat-crop is promising to give an exceptionally large yield. It will be remembered that the traders as a whole have a larger stock than is required for consumption up to harvest-time, and those traders whose stock is large will now begin to get anxious. They have no

use for the wheat except to sell it, and they fear that when the new crop is harvested the supply may be so large that prices will fall substantially, so they decide to try and sell as much as possible before this fall in price occurs. Those traders then who have a large stock bring rather more grain than usual to this market, with the result that the total supply is, say, 2200 maunds. But the shopkeepers also have been considering the weather and the prospects of the next crop, they know of no unusual requirements for consumption, now that the troops have left the neighbourhood, and when they see signs that the supply is larger than usual and that some holders are anxious to sell, they will at once begin to offer less than the usual price of three rupees. Then there will be bargaining and hesitation as before, but unless the traders are prepared to take some of their stock home again they must accept lower prices in order to dispose of what they have brought. There is again equilibrium between the amount demanded and the amount offered, but the equilibrium is at a lower price.

Let us take one more market-day, and let us suppose that a few days before it a severe frost has occurred at the critical period when the crop is liable to damage. Both traders and shopkeepers know that the new wheat crop has been severely injured, it is too early to estimate the yield, but they have reason to think there will not be enough wheat to supply the town with 2000 maunds a week for the whole year. Then all the traders will see that they are in a position to ask for higher prices at once; any quantity not sold now will be sold later on, and they do not want to sell much at once, because they cannot yet estimate what the future supply will be. So on this day the supply brought to market is seen to be very small, perhaps only 1200 maunds in all, and the shopkeepers

recognise at once that they will have to pay much higher prices, and so will require much less wheat, than usual. Perhaps they will begin by offering three rupees eight annas, while the traders begin by asking four rupees. Possibly a little will at first be sold at one or other of these extreme prices, but there will be the usual bargaining and hesitation, and eventually the market-price will settle at perhaps three rupees twelve or three rupees fourteen annas.

This description of the course of a market leaves out many complications that occur even in a small local market in ordinary life ; but it is intended to bring out clearly the central fact of the equilibrium between Demand and Supply, and the complications do not alter this fact, though they may make it harder to see. The buyers are guided by what they know about the Demand of the people for whom they are buying : they know by experience that the consumers in the town will buy a certain quantity of wheat at any particular price, and that this quantity falls as the price rises. They are buying merely to sell again : if they buy too much, they will not be able to sell it all at the corresponding price, and will lose the profit they hoped for on its sale. If, on the other hand, they buy too little, they will not have enough to sell at the corresponding price, and will lose profit they might have made on the larger quantity ¹ The sellers, on the other hand, are only anxious to sell for the highest possible price, and the higher the price the more they will sell. The function of the market, that is of the free intercourse between buyers and sellers, is to

¹ It is of course possible that the buyers might see a chance of getting a larger profit by offering a small quantity at a very high price than a larger quantity at a lower price. Shopkeepers are occasionally suspected of such action, especially in the early stages of a famine ; but the more usual position is that the largest profit is made by the largest possible sales.

find out the price at which the wishes of the two classes will coincide ; the individuals in each class have to find out as best they can both the views of the other class and the views of the other individuals of their own class, and the extent to which they are able to do this is an indication of the degree to which any existing market approximates to the perfect market of our definition.

In the next chapter we shall indicate some of the chief complications which in this first sketch we have left out of account, but before turning to them there is one point worthy of notice in the description that has been given. People are very apt to become angry with those who possess a supply of an important commodity, such as wheat, when they raise the price, as we saw it raised on the occurrence of the frost. "These traders were ready," it will be said, "to sell at three rupees ; what right have they to raise the price to four rupees and make poor people go hungry ?" Now the student of Economics is not interested in the question of *right*, he knows that as a fact owners of a commodity will raise the price in such circumstances ; he knows that legally they have a right to do so ; and he leaves the question of moral or religious right to be dealt with by the teachers and preachers who tell people what they ought to do. But the economist can point out that the effect of this raising of prices is to secure a provision of food later on for persons who might otherwise starve. This fact will become plain if we look back for a moment to the first stage of Production, and see what would happen there on the occurrence of a calamity such as a severe frost. The cultivator, who is growing food for his own support, will see at once that, as a result of the injury caused by the frost, he will not have enough grain to feed his family until the next harvest, he had calculated that the

yield of the spring crops would be sufficient for this purpose until about October or November, when the autumn crops would be harvested, but he now sees that if he continues to consume grain at the ordinary rate his stock will be exhausted in July or August. He must, therefore, as a prudent man reduce his consumption of grain *at once*, and reduce it so much that his existing stock and the yield of the spring crops taken together will last until the autumn crops are ripe. He and his family must then go through the summer with insufficient meals, but they will, of course, do whatever they can to supplement these meals by gathering wild fruits, and by growing vegetables or garden crops that will give additional supplies of food during the period of scarcity.

Now this is exactly what happens in the town when the traders of our illustration raise prices. If they continued to sell at prices which would allow of consumption continuing at the rate of 2000 maunds a week, then the entire stock of wheat would be consumed some time during the following summer, and by the winter there would be no wheat left. The effect of their raising prices is to make the consumers reduce their consumption at once; they can no longer get full meals of bread made from wheat, and must live on meals reduced in quantity and supplemented by any other kind of food they can get, and in this way the stock of wheat is economised (in the ordinary sense of the word), so that there shall be some wheat available throughout the whole of the period of scarcity, instead of the whole of it being consumed in the early stages.

CHAPTER XXVII.

MARKET EQUILIBRIUM · SOME COMPLICATIONS.

WE will now notice some of the chief complications that are found in the actual working of a market. In the first place, we may suppose that some cultivators bring their wheat for sale in the market, and that thus the entire supply is not in the hands of traders. In markets where cultivators bring a considerable proportion of the total supply, the position of both buyers and sellers is rendered more difficult. Cultivators cannot know so much about the conditions either of demand or of supply as the traders and shopkeepers, whose main business it is to acquire this knowledge, they will be influenced mainly by what they have heard as to the price which prevailed last market-day, but they will also be influenced by other considerations, especially by their need of money at the time. Thus it may happen on any particular day that the supply of wheat is much larger, or much smaller, than usual, because many cultivators, or very few, cultivators have come in: the general course of the market will not be affected, but traders may find that the price must be lowered, or shopkeepers that they must pay higher prices because of this unexpected condition. In any case the cultivator is not likely to get the best possible price. he cannot estimate the stocks and the intentions of the people present as

accurately as the regular traders and shopkeepers, and if—as is usually the case—he is pressed for money, he will probably accept the offer of a shopkeeper and sell at a somewhat lower price than the conditions of the market would justify. This sort of thing happens in all markets; some dealers are more expert and have better judgment than others, and are thus often able to get a slightly higher price if they are sellers, and a slightly lower price if they are buyers, than other dealers who are less expert; and some dealers may for private reasons be forced to sell or buy at prices which in other cases would not satisfy them. The consequence is that in actual life it is very rare to find the whole supply in a market sold *exactly* at the equilibrium-price for the conditions prevailing; some will have been sold rather cheaper, and some will have been sold, rather dearer, according to the needs and capacities of individual dealers, but as a rule the total sum of money realised will be found to agree very closely with what it would have been if all sales had taken place exactly at the equilibrium-price

Next we may notice the complications resulting from the possibility of import and export. We may suppose that a railway has been opened to the town which we have been considering, so that import and export becomes possible, and that representatives of merchants from Calcutta or Cawnpore attend the market to buy wheat if they can get it at prices that suit them. When they first make their appearance, the whole market will be disorganised, the traders who have brought wheat to sell will have no idea what these new buyers want, and the shopkeepers will be equally ignorant. But they will soon get accustomed to the change. they will find that these merchants are just in the same position as the shopkeepers in that the amount

they will buy depends on the price, that is, they will buy more as the price falls and less as the price rises. There are now more buyers in the market than before, but the method by which an equilibrium-price is reached remains unchanged. The local men have, however, difficulty in forecasting the action of the buyers from a distance: they have learned by experience the local Demand and the local Supply, but the merchants besides taking account of these factors think of the market conditions in Calcutta and Cawnpore and elsewhere, they may buy very largely, and so raise prices, because they know that prices are higher still in Calcutta, or they may abstain altogether from buying and so send prices down if they know that prices in Calcutta are low. Thus the local men must extend their knowledge if they are to succeed in their business (the business that is of selling at the highest, and buying at the lowest, possible prices); they must learn as much as they can of the course of prices in the markets with which their market has become connected, so that they may be in a better position to forecast the action of the merchants who come from those markets.

This change from independent to inter-connected markets has taken place rapidly in northern India during recent years, and markets such as that described in the last chapter are now the exception, where formerly they were perhaps the rule. Even in quite small towns, the dealers in wheat, cotton, and other staples maintain close relations with the larger markets, it is by no means uncommon for up-country merchants to get a telegram every morning indicating the course of the markets in Calcutta, while at times of special activity telegrams from London or from Chicago may be read in towns of which ordinary people scarcely know the names.

A third series of complications arises when the buyers,³ or the sellers, in a market combine together instead of competing with one another. We may suppose that in the market described in the last chapter all the dealers come to an agreement as to the amount of wheat to be offered and the price at which it will be sold, they might then be able to maintain the equilibrium at this price, and the individual shopkeepers could merely take the amount offered at that price. This complication is not uncommon ; in some countries the legislatures are actively engaged in endeavouring to prevent such combinations (known as monopolies, rings, trusts, combines, and by other names) from raising prices beyond the point that is considered reasonable ; and economists have in recent years devoted a large amount of study to the theory of combinations and monopolies. Students will have to make themselves familiar with this subject at a later stage ; for the present it is sufficient for them to know that a combination of buyers or sellers may, at any rate for a time, make a material difference in the quantity of a commodity sold and in the price which it fetches

Next, allowance must be made for the fact, which has already been indicated in the previous Book, that as a rule a want can be met by more commodities than one, and that if a particular commodity rises in price consumers are likely to use some other commodity in its place. Thus merchants who deal mainly in wheat cannot confine their attention to that grain, but must know also the conditions of demand and supply in relation to other grains, such as barley and millets and pulses. If some of these are cheap, when wheat is dear, consumers will substitute them for wheat, and then the Demand for wheat will fall more than if no substitute for it were possible, or, on the other

hand, the demand for wheat may be increased by a failure of the rice crops if rice becomes so dear that consumers substitute wheat for it. Even in a small market, then, dealers can rarely confine their attention to a single grain, but must know all they can about supply and demand in the case of each of the grains ordinarily used as food; and, as a matter of fact, the trade in the various grains is very often conducted by the same set of dealers.

Next we come to the important question of holding up stocks. We have supposed for the sake of simplicity that dealers bring a certain quantity of wheat to market and take none of it back. But in practice, and especially where a dealer has his store near the market, this is not the usual case; the commodity need never be exhibited in the market, or it may be sent back to the store unsold. Thus sellers can offer much or little according as they see the demand to be brisk or slack, and buyers cannot often judge of the amount that is available for sale merely by the number of carts or sacks actually exposed in the marketplace, they must get what information they can on this point from other sources and draw inferences from the attitude of the sellers. Buyers, on the other hand, can, and often do, hold a stock in excess of what they need for immediate consumption; they can then buy less if prices are high, and draw on their stock until next market-day or they can buy more if prices are low and add to their stock for the time being. Thus buyers and sellers alike cannot judge merely by what they see, but must constantly use their judgment to conjecture what other people really want.

Again, we have treated buyers and sellers as necessarily different people, but in a large market the same man is often ready to buy or to sell according to the price that he

can secure A merchant may be ready to buy wheat at three rupees, and to sell it at three rupees two annas ; if the price falls for the moment to three rupees he will buy, because he has come to the conclusion that the price will very shortly rise, and that he will be able to secure a profit by selling at three rupees one anna or more. On the other hand, he is ready to sell and reduce his stock when the price is three rupees two annas if he has reason to think that the price is going to fall. In a well-developed market such merchants are almost always to be found ; practically their whole business consists in forecasting the equilibrium of the market from the information they can collect as to supply and demand, and taking advantage of every opportunity of selling above, or buying below, what they think the equilibrium price will be. If their forecasts are correct, that is to say, if they have judged accurately the price at which supply and demand will be in equilibrium, they will make a profit on each transaction , if they have made a mistake they will lose money instead of gaining it

The effect of the presence of such merchants is, as a rule, to keep the price very near to the true equilibrium price. If the price rises, some merchants at once offer to sell, and others cease to make offers to buy ; that is to say, the supply of the moment is increased, and the demand of the moment is reduced ; the conditions of the moment are changed, and the price will be reduced again. In such a market then, the price is constantly rising and falling, but each rise produces a tendency to fall, and each fall produces a tendency to rise, so that the price is never greatly different from that which is justified by the conditions of supply and demand.

The fact that merchants are engaged in forecasting the future leads to further complications, which are commonly

known as dealings in "futures." If wheat is selling at about three rupees to-day and a merchant has reason to think that the price will be three rupees four annas next month, he would obviously be wise to buy as much wheat as he can now, keep it for a month, and then sell it at the higher price. And merchants often do this even when they have not the money to pay for their purchases; they borrow the money in one of the various ways that students will read about when they come to the subject of Credit, or they agree with the seller that he shall deliver the wheat next month and receive payment then. Thus if *A* and *B* are two merchants, *A* in June buys 1000 maunds from *B*, agreeing that *B* is to give him the wheat on 15th July, and to receive 3000 rupees when he does so. Before that date the price rises to three rupees four annas, and *A* sells the 1000 maunds to *C* for 3250 rupees, though at the time he has no wheat in his possession, but has only *B*'s promise to deliver it. On 15th July, *A* receives 3250 rupees from *C*, pays 3000 rupees to *B* and tells him to deliver the wheat to *C*. *A* has never had the wheat in his possession, but he has made a profit of 250 rupees by buying it at a low price and selling it at a higher. *C* in turn may have sold it to *D* for 3400 rupees, and so on.

On the other hand, if *A* thinks the price will fall, he may sell wheat to *B* without having any wheat in his possession, but hoping to buy it cheaper before the date comes for delivery, and then the transaction is settled in the same way. We may suppose that *A* has sold 1000 maunds to *B* for 3000 rupees for delivery on 15th July; before that date he finds himself able to buy 1000 maunds from *C* for 2800 rupees for the same date, and when the day comes he tells *C* to give the wheat to *B*, receives 3000 rupees from *B*, pays 2800 rupees to *C* and has 200 rupees profit. On the

other hand, *A* may have made a mistake as to the likelihood of a fall of prices, and may be unable to find anyone willing to sell at less than three rupees. In that case when the day comes for delivery to *B*, he must either break his contract (which may mean ruin to a trader), or he must buy the wheat to satisfy *B*'s claim. If he can only get it for 3200 rupees, he must pay that sum, and as he only receives 3000 rupees from *B*, he has lost 200 rupees where he hoped to make a gain.

Transactions of this sort look at first sight like mere gambling, that is to say, people seem to be selling or buying simply on the chance of some future event, and there is probably a certain amount of gambling in all large markets ; but a man who starts to deal in a commodity without knowing the conditions of its supply and demand will very soon become bankrupt, because he will not be able to forecast the conditions and the resulting equilibrium-price with the same degree of accuracy as those merchants who spend their time in studying the conditions. He will take the chance of a rise when the conditions should lead him to expect a fall, and will look for a fall when he should expect a rise, and in either case he will lose by the transaction, and the more expert merchants will make profits at his expense, until he either loses all his money or comes to understand the market-conditions for himself.

A modern well-developed market, then, consists largely of a body of merchants, each of whom devotes all his energies to learning all that he can about the conditions affecting the supply and demand of the commodity or commodities in which he deals, and forecasting on the basis of this knowledge what the equilibrium-price is likely to be both in the immediate future (to-day, or to-morrow, or next week), and at more distant dates. He will buy

when he thinks he can sell again at a profit, and sell when he thinks he can buy more cheaply : at one time he may have large stocks on hand, and at others he may have sold more than he has ; but his success in business depends on his ability to forecast the price at which the supply and demand of the market will be in equilibrium. In the next chapter we shall see how such markets are connected with the actual consumers and the actual producers of the commodities in which they deal.

CHAPTER XXVIII

RELATION OF PRODUCERS AND CONSUMERS TO THE MARKET.

A MODERN wholesale market consists, as we have seen, largely of a body of merchants engaged in forecasting the supply and demand for the community in which they deal. In some cases both consumers and producers may be found taking part in these dealings, but this occurs only when the quantities which they require or offer are great. Thus where the spinning of cotton yarn is done in large factories, the spinners would take part in the wholesale market for yarn together with the merchants who buy only to sell again, or buy in order to send the yarn to places where it will be consumed. But the hand-loom weaver obviously cannot buy the small amount of yarn which he needs in a market which may be hundreds of miles from his home, and where a large number of bales is sold in a single transaction; and in the same way, neither the cultivator nor the eater of wheat can take part in the wholesale wheat market. These large wholesale markets are therefore connected with the consumer and the producer by local or subsidiary markets, and by the dealers or shopkeepers whose trade is conducted in small quantities, and is spoken of as retail as distinguished from wholesale. We will examine the position of the consumer and the producer of a commodity such as wheat, the chief wholesale markets

for which are so closely connected that there is practically a single market for the whole world.

The man who wants wheat for the food of his family ordinarily buys it from a shopkeeper, and as a rule, he has not much to say directly towards settling the price. The shopkeeper settles the retail price, and the consumer buys more or less according as the price is low or high. But this does not mean that the consumers as a body have no influence on price, as a matter of fact, their demand is one of the most important factors in the market. The shopkeepers of any town know more or less accurately the demand of that town, that is, the quantity which it will buy at each price, and, as we have seen, they provide for its consumption more wheat when the price is low and less wheat when the price is high. A shopkeeper knows what his stock of wheat has cost him, and he fixes his retail price so as to give him as much profit as possible. But in ordinary circumstances he cannot fix the retail price very much above the wholesale price, because if he did so he would feel the competition of the other shopkeepers. All of them want to sell their wheat, and if one shop asks an excessive price some of its customers will go to other shops and buy there instead, and the shopkeeper is thus forced to charge a retail price not greatly in excess of the wholesale price.

It is obvious that if there are not very many shopkeepers dealing in wheat, they might all agree to sell at a considerably higher price than the wholesale price would justify. Probably this happens at times, and certainly consumers often think that it happens; but the point is not important at present. The main function of the shopkeepers from the point of view of the market is to represent the consumers' demand, and they do this in the local market in the way that has already been explained. The

buyers from larger markets who attend the local market are quick to notice the changes in the local demand, and the information they collect is of course communicated to the merchants for whom they are buying. and in this way the larger wholesale markets are able to watch the changes in the demand of the country where their agents buy. Thus, the demand of the consumers does in fact enter largely into the calculations as the result of which wholesale prices are fixed.

The case of the producer, that is, the cultivator, of wheat, is somewhat different from that of the consumer. If he brings his wheat to the local market, he is, as we have seen, not in the best position to get the highest price, and probably he sells as a rule rather below the price that a better man of business would be able to secure. If he is dissatisfied with the price offered, he can take his wheat back and wait for another market-day; but as a rule he is too busy to waste many days at market, and brings his wheat for sale only when he needs the money, so that he is likely to take whatever price he can get. If, on the other hand, he makes over his wheat to a dealer in the village, he has not much chance of learning what the market-price really is, and the trader is likely to give him something less than the wheat is worth at the moment. Of course, if there were many traders in or near the village, their competition to get as much as possible for sale would prevent the price falling very low as they would bid against one another, and the cultivator would sell to the one who offered most; but this condition is rare in Indian villages, where there is often only one trader, or else a few acting in agreement, and where many cultivators are in debt to the traders and so are not their own masters. It seems then as if the traders who buy wheat in the villages could continue to

get it at prices very much lower than those that prevail in the markets, this is, as a matter of fact, true *up to a certain point*, and when students come to examine the history of Indian prices in detail, they will find marked differences between the recorded market-prices, and what are spoken of as "harvest-prices," that is, the price at which cultivators make over their crop to the trader at harvest time. The difference appears to be gradually declining, that is to say, cultivators are getting more nearly the market-price for their produce than they used to do, but it is still an important consideration for economists and statisticians when they are investigating the income which the country derives from agriculture.

But though traders can get wheat, and other produce, in the villages at prices substantially lower than those prevailing in the market, they cannot get wheat or other produce for nothing; in other words there is a limit of price below which they cannot go. This limit is a most important fact in Economics, and we must examine it in a little detail.

At the beginning of this Book, we saw that a cultivator who is producing for his own consumption, carries his production on to the point where the Utility to him of what he produces is balanced by the Disutility of his exertions in production. When he is producing for the market, there is still a balance, but it is between the disutility of his exertions and the utility of the money which he gets for his produce, not the utility of his produce itself. A cultivator who has grown an acre of wheat and thinks that the price he gets for it does not repay him for his exertions in production, is helpless so far as that crop is concerned, he can only take the highest price that is offered. But when the time comes to sow the next crop,

he will not sow so much wheat as he did before ; he will perhaps sow none at all, or at any rate he will not sow that part of his land where the exertion of growing wheat is greatest. Thus if the price that cultivators get for wheat is too low, in the sense that it does not repay them for their efforts and exertion, less wheat will be sown in the following season, whether the cultivator sells the wheat in the market or sells it to a trader in his village. In either case, there will be less wheat to sell in the market, that is, the Supply of wheat will be reduced ; and if the trader wants to continue his business on its former scale he must offer the cultivators a rather higher price to induce them to sow as large an area as before. Thus, even when a trader has no competition to face in the village and is sure of getting for sale all the wheat that is grown in it, he must make it worth the while of the cultivators to grow wheat, and if he offers too low a price, they will not grow it, and he will be the loser by having less wheat to sell. If market-prices have fallen, traders may not want to have so much wheat as before, and by keeping the price low in the villages they can reduce the production of the next crop, while, if market-prices have been high and they want to have more wheat to sell, they must offer a higher price in the villages in order to induce cultivators to sow a larger area. The area sown with a particular crop in a particular season depends on several considerations, of which the expected price is only one, and therefore the statistics of the area sown cannot be explained solely by the course of prices, but in the case of crops like wheat, or cotton, or sugarcane, which are grown mainly in order to sell the produce, it is usually possible to trace a clear connection between the extent of the area sown in a district or province and the prices that have recently prevailed.

We have seen then that the price of a commodity in a wholesale market must be affected by the attitude of both consumers and producers, though none of them may have any dealings in that market. Changes in consumers' demands have constantly to be taken into account, and on the other hand, the supply is largely determined by the price that reaches the producer. Merchants in the great markets may not know what is being paid to small producers at a distance, but they spend much trouble in getting the earliest possible information regarding the extent to which the crop has been sown,¹ since this is the basis of any accurate estimate of the supply, and if they hear that the area has been reduced they will at once see that as the supply is going to be decreased, the equilibrium-price of the market will have to be raised.

A wholesale market, then, is not simple in its working. There may be a large number of sellers, some of them producers or agents of producers with a stock of the commodity that they really want to sell, and other merchants who are selling without reference to their actual stock (if they have any), but only with reference to their estimates of the course of prices, while of the buyers some may be merchants buying in order to sell again, while others want the commodity either to consume it in their own factories or to sell it to consumers throughout the country. Buyers and sellers alike are watching for every item of information that throws any light on the possibilities of changes in the

¹ Students have probably noticed in the newspapers the 'forecasts' which the government publishes from time to time of the area sown, and the probable yield of crops like wheat, or cotton, or jute. These forecasts are prepared for the use of the markets, and the officers who prepare them have to take precautions to ensure that all merchants have the same opportunity of getting them, and that no merchant shall have a chance of acting on the information before it is known to the market generally.

demand or the supply, and are constantly revising their estimates of what the price will be to-day, or to-morrow, or next week, or even some months hence ; and they are occupied in ascertaining the views of other merchants and the prices at which bargains have been made. The men who are most successful in forecasting the future course of prices may make very large fortunes, and those who are least successful are likely to become bankrupt, while most of the merchants may make a reasonable income, which, however, may vary very greatly with the chances of the market. In most countries it is easy for the student to get to know something of the course of the larger markets, because the daily newspapers devote a large amount of space to the subject ; students in northern India who have access to any of the English papers published in Calcutta or Bombay can in the same way get to know something of the market in wheat or cotton, or jute, or tea, but the English papers published up-country and the great majority of the vernacular papers give very little information on the subject

We have said that a modern wholesale market is not altogether simple in its working, but among all the complications, the central fact holds good that it consists of people engaged in studying the Demand and the Supply of the commodity in which it deals. Each of them wants to know what quantity of the commodity will be demanded at each price, and what quantity will be offered for sale at each price : with this information they can conjecture what the equilibrium-price will be, that is, the price at which the quantity supplied will be equal to the quantity demanded, and their livelihood depends on the accuracy of their conjectures

CHAPTER XXIX.

NORMAL EQUILIBRIUM.

WE have now seen that the retail prices of commodities, that is, the prices with which ordinary consumers are directly concerned, depend on the wholesale prices arrived at in the larger markets; and we have seen that these wholesale prices fluctuate from day to day according to the information obtained and the views formed by the persons who deal in the market. But while prices, both wholesale and retail, do in fact fluctuate, we must recognise from our experience that the ordinary consumer has a more or less definite standard of price for each of the commodities he is accustomed to buy; when the price is above his standard he says the price is high, and when it is below the standard he says it is low. And it is not only the consumer who thinks of a standard of price, the market also has a standard, which is usually spoken of as 'Normal Price'. The two expressions 'standard price' and 'normal price' mean the same thing: when we set up in our minds a standard of price, we do not mean that the price of the moment should always be exactly the standard we have set up, but we mean that we regard the divergences from that standard as exceptional, and when the price has diverged we expect to see it return to the standard. In the same way we speak of the price of the

moment as abnormally low or abnormally high, meaning that it is different from the standard or normal price. Thus, in some parts of northern India ordinary people think of sixteen sers as the standard or normal price of wheat; when less than this quantity can be got for a rupee, they consider that wheat is dear, or that the price is abnormally high, while when they can get a larger quantity, they say that wheat is cheap, or that the price is abnormally low.

The idea of a Normal Price is of great importance, and we have to see how it is determined and how it is related to the market price. But it is well to say at once that the standard or normal price, whatever it may be, does not remain the same for ever, but changes from time to time. Thus, in some of the places where the normal price of wheat is sixteen sers, it was probably twenty sers or even more in the days before the large trade in wheat had developed; and perhaps old people could still be found who regard twenty sers as the normal price and sixteen sers as abnormally high. They still think of the standard that prevailed in their youth, and have not noticed that the standard has changed; but all ordinary people in these places would say without any hesitation that at the present time twenty sers is an abnormally low price. A normal price then lasts for a long time compared to a market price, which may change from hour to hour, but it is itself liable to change, though more slowly and gradually.

To see what this standard or normal price is, we must go back to what we said in the last chapter about the way in which producers balance the utility of their produce, or of the money it brings, against the dis-utility of producing it. In order to examine this subject more closely, it is convenient to take an industry that is not, like wheat-

growing, dependent on the seasons of the year for an increase or decrease in production. A wheat-grower who wants to change the amount of his production must decide between September and November of each year; after November he can sow no more wheat for a year. We will take instead the production of coarse country cloth, which hand-loom weavers can work at throughout the year, and we will suppose that the price of this cloth in a market has been such that the weavers whose cloth is sold in it just make a living after paying for the yarn and other materials they use. At a later stage students will have to pay close attention to the exact meaning of this expression 'just make a living' - for the present, we may explain it provisionally as meaning that they get enough food and clothes for their families, and can spend something on what we have called conventional necessities, but that they are not able to save up money or increase their expenditure. Now suppose that the market-price of cloth falls, and the weavers find that the price does not now enable them to make a living. So far as they have cloth already made, they can do nothing but accept the price that is offered, and at first they will probably go on producing as before, and either cut down their expenditure on food or get into debt. But if the price continues low, they cannot go on in this way - they will find that they can borrow no more money, and they will begin to suffer from insufficient feeding. They do not understand the process by which prices are fixed, but they do understand that they are not making a living by weaving, and they will do something else, instead of, or in addition to, their regular industry. All the weavers will not act in the same way: probably some of them, whose looms are nearly worn out, will leave them idle and work as day-labourers in the fields or in the

town : some of the younger men will go away and look for work in cities most will probably continue to make some cloth, but many of them will leave their looms at times when labourers are wanted and wages are high, going to work, for instance, in the harvest-fields. The result will obviously be that less cloth is produced, because fewer weavers are working, and some of them are only working for part of their time ; and if less cloth is produced, there will be the less to offer for sale in the market, or in other words, the supply will be reduced. But the reduction of the supply is as we have seen just what is wanted in order to raise the market-price, and in ordinary circumstances this effect must follow. It is obviously not possible that the price can remain for long below the point at which the weavers can make a living , and if it falls below that point for a time the supply of cloth will fall off and the price will be raised again towards that point.

Now let us take the opposite case and suppose that the price rises so that weavers can make more than a living, that is to say, can save up money or increase their expenditure. Here one of two results may follow : if the weavers are anxious to save up money or increase their expenditure, they will increase their production ; but if they are not, anxious on these points, and value leisure more than money they will decrease their production. We must examine these cases separately.

The first case is that which would usually follow in western countries, and economists writing for those countries are probably justified in passing over the possibility of the second case. Where men want to make money and improve their way of living, they are quick to seize such a chance. the weavers would work for longer hours, they would take more help from their families, and some whose

looms were worn out would buy new and efficient ones. Thus the production of cloth would be increased, and this would mean an increase in the supply in the market, and consequently a fall of price.

In India and some other countries it is not safe to assume that this result must certainly follow. Some classes of the people value leisure—or we may say idleness—more than the possibility of saving money and increasing expenditure, and if these people find that they are making more than a living, they may do less work, that is to say, they may decrease their production instead of increasing it. This would mean a decreased supply in the market, and this would mean a further rise in price instead of a fall. A full analysis of the course of the market in this case cannot be made effectively without a more complete knowledge of the science than elementary students possess; and for the present we leave this case aside as exceptional. We ask students then to assume provisionally for the purposes of their study that Indian producers as a whole will try to make money when they have a chance, but we also ask them to remember that if a particular class of producers does not want to make money and reduces its production when prices rise, then the adjustment of price will follow different lines from those that are indicated in this assumption. We do not ask students to assume that when the price of a commodity rises every individual artisan who makes it will at once work harder and increase his production; the assumption is that the production will increase as a whole. Some producers will probably prefer rest, and produce less, some will take little notice of the change, and produce the same quantity as before, while others will work harder and produce more, and the assumption is that the extra produce of those last named will

more than counterbalance the decrease in produce which results from some producers doing less work.

On this assumption, which is probably—as a rule, but not universally—correct in the present conditions in northern India, a rise in the price paid to producers will lead to an increased production, and the resulting increase in supply will lower the market price. We thus see that in the second, or artisan, stage of production, *while conditions remain the same*, there is in fact a standard or normal price, as is popularly supposed; and that when the market-price diverges in either direction from that standard, the action of producers will tend to bring it back. If the price falls, production will be reduced, and if the price rises production will be increased. The standard of price will be the price at which the ordinary artisans can just make a living, after paying for their materials and for the cost of keeping their tools and appliances in order.

The words, *while conditions remain the same*, printed in italics in the last paragraph, are of the utmost importance. If the proviso were omitted, it would appear that the standard of price could never change, and this would be entirely untrue. Conditions do in fact change, and then the standard or normal price changes, as we shall see later on, but first we must see if our general conclusion holds for the factory-stage of production as well as for the artisan-stage.

Let us take the case of a market supplied with sugar from several factories which buy up the crude country sugar known as *gur* and prepare white sugar from it; and to simplify the argument, let us suppose that the profits are not affected by the sale of the molasses (*shira*) obtained in the process of manufacture. We obviously cannot speak, as we could of the artisan, of such a factory just making a living, but we shall find that in this case the

standard of price is set by what we will call the Expenses of Production, and that this standard corresponds very closely with the standard which we found to exist in the case of artisan-production. The term Expenses of Production is used to express the total of several items of expenditure, its exact significance will require careful study at a later stage of the course, but for the present we may say in general terms that it includes (1) the price of materials, fuel and stores used in the process of manufacture; (2) the cost of maintaining and replacing the buildings and machinery, (3) the salaries and wages of all the employees and workmen, and (4) the owner's profit. Detailed accounts of expenditure under the first three heads are kept in all factories, and the expense of producing, say, a maund of sugar can be calculated by taking the expenditure over a period of time and dividing it by the number of maunds produced in that time, to this figure something has to be added for the owner's profit. The nature of this last item will require examination later on when we are considering the subject of Distribution, but we can see at once that a man will not work such a factory for nothing; he puts his work and his capital into it because he expects to earn an income from it, and the profit represents this income.

Let us suppose that the accounts of one of these sugar factories, which has no special advantages and no special drawbacks, show that the money paid out comes to eight rupees per maund of sugar produced, and that the owner adds one rupee as a fair profit for himself, the expenses of production are then nine rupees per maund. By 'fair profit' we mean a profit that just about satisfies the owners of such factories, when they are making this amount they are not sorry that their money was not invested in some

other industry, and on the other hand they are not anxious to increase their investments in sugar-making. Then, if the market-price of sugar is nine rupees, or equal to the expenses of production calculated in this way, factory owners will be just about satisfied. If the market-price falls to eight rupees, there will be nothing left for profit, and owners will at once reduce the amount they offer for sale, that is, they will reduce the supply in the market, in the expectation that this reduction in supply will cause the market-price to rise again, up to the point where sales will give them the profit that they consider fair. In many cases, where the fall in price is thought to be very temporary, owners may not alter the working of the factory, but merely put more of the sugar made into their stores, and wait to sell it later. In this case they are acting just like dealers in the market. But they may also reduce the amount of sugar produced, and this can be done in various ways without actually closing the factory, they may work for a shorter time each day, or they may stop working some of the machines, or they may merely avoid hurrying, it is part of the business of a factory-manager to know how to change the rate of production when the need arises.

Thus, when the price falls below the expenses of production, owners of factories will take measures that are likely to result in raising the price again. Their action is conscious and deliberate, while the action of the weavers, whom we considered a few pages back is instinctive, but the result is in both cases the same, a reduction in the supply which causes the market-price to rise towards the point from which it has fallen. Now, if we suppose the market-price of sugar rises to ten rupees, we see that the owner will get two rupees profit on each maund instead of the one rupee which just about satisfies him. We need

not think in this case, as we had to think in the case of artisans, that owners generally may decrease production. They work their factories for profit, and when they see that the price gives them a high profit per maund, they will sell as many maunds as possible in order to obtain the largest possible profit. They will endeavour to sell any stock of sugar they may have on their hands, and they will increase production, possibly by working longer hours, and in any case by hurrying up work as much as possible. Thus, when the price rises above the expenses of production, the supply in the market will be increased, and the increased supply will bring prices down again.

In the stage then of factory-production, we see that there is a standard or normal price, and that when the market-price diverges from this, producers are induced to alter the supply in such a way that the divergence is counteracted. The position is thus precisely the same as in the stage of artisan-production, though the complex working of a factory compels us to speak of the expenses of production instead of the simpler expression that was applicable to the artisan. But if we consider the artisan's income (after paying for materials and for the maintenance of his appliances) to consist partly of the wages he has earned by working and partly of the profit resulting from the management of his own business, then we may correctly say that in his case also the ^{standard price is the} ~~expenses of production~~ ^{expenses of production}, and we may sum up the foregoing discussion as follows

In all cases where the production of a commodity is not subject to a monopoly, the Expenses of its Production indicate the standard or normal price, which remains the same so long as the conditions of consumption and production are unaltered. The market-price must be expected to

fluctuate, but whenever it diverges from the normal price, causes are brought into operation to reduce the divergence by altering the supply offered in the market. The market-price is thus always tending to return to the normal.

There is a possible exception to this general rule in the case of artisan-production if the majority of the artisans prefer leisure to money. This case has some interest both in theory and in practice, but its discussion must be postponed.

Where production is controlled by a monopoly the position is materially different, but its discussion must be left for study at a later period of the student's course.

In the next chapter we have to say something about the changes in the standard or normal price which result from changes in the conditions of production or consumption, but before we turn to this a little may be said on a question of wording, which might otherwise be a cause of difficulty. Earlier writers were accustomed to use the term 'Cost of Production' in the sense which we have expressed by 'Expenses of Production'; and some of them used the word 'natural' to express what we mean by standard or normal. Students will thus find some writers saying that the Natural Price of a commodity is equal to the cost of its production. The word Natural has now been generally given up because it has several meanings, and the word Normal is generally used in its place. The expression Cost of Production was as a matter of fact used in two senses; sometimes it meant what we have called the Dis-utility involved in Production, and sometimes the money that must be paid to balance this Dis-utility. The two senses have been occasionally confused, and it is convenient to avoid the risk of confusion by using the term Expenses of Production to signify the cost measured in money.

CHAPTER XXX.

CHANGES IN EXPENSES OF PRODUCTION.

WE have seen in the last chapter that the normal price of a commodity is equal to the expenses of its production *so long as the conditions of production and consumption remain unchanged*. We have now to see exactly what this proviso means, and how far it is true in the world in which we live.

The proviso does not imply either that all the items of expenses remain exactly the same during the period under consideration, or that they are the same in all factories producing the same commodity. The managers of a factory have two main objects in view: one is, as we have seen, to sell the produce at the highest possible price, and the other is to keep the expenses of production as low as possible. A competent manager is thus constantly on the look-out for any means of reducing the expenses; he compares the efficiency of different classes of labourers; he plans the various operations so as to require as few labourers as possible, and he sees whether any particular piece of work can be done more cheaply by labourers or by machine. At the same time he has to think of buying his materials as cheaply as possible, of reducing the cost of carrying them, of getting the best work out of his staff, of saving office expenses by reducing the writing and account work, and

generally he has to watch every branch of the work so as to see where any saving is possible. And managers differ very greatly in competence, so that it is most improbable that many factories will be found to have exactly the same expenses of production in detail.

When, therefore, we speak of the expenses of production of a commodity, we must not think that every maund of it costs exactly the same amount of money to produce. In some factories a maund costs rather less, and in other factories it costs rather more, and again the expense may vary from time to time, even in the same factory. But at any given time it is possible to recognise a standard of expenses; we can say, for example, that in a given season the expense of producing a maund of sugar for a certain market has been nine rupees, even though some factories have produced at eight rupees and others at nine rupees eight annas. The former class has made more than the usual profit, and the latter class has made less, but the average profit of the whole industry has been about the same as if all factories had worked at the same cost. It is then the standard expenses in the industry that set the standard of price, and not the expenses of any particular factory.

We must recognise clearly that this standard of expenses does, as a matter of fact, change with changes in the conditions of production and consumption. It is possible to imagine a state of things where the population is stationary. where the people go on consuming the same quantities of the same things, and where the methods of production do not change. Economists sometimes assume for purposes of argument the existence of such a Stationary State, and it is true that, if such a state existed, the standard or normal price of commodities would remain unchanged.

It is not possible to point to any period in the economic history of India where such a Stationary State actually existed, and that history shows that changes tend to increase in rapidity, so that it is very unlikely that the country is on the way to such a state, but we can pick out a few possible cases which will serve as illustrations of what a Stationary State would mean if it ever came into existence

Take the case of the potter in a self-supporting village, such as we considered in Chapter XIII. While the population of the village remains about the same, and the habits of the people are unchanged, the demand for earthen vessels in the village will vary very little from year to year. The potter will go on making about the same number of the same sort of vessels, and receiving the same amount of grain in exchange for them. There will be no market and no bargaining as to the price to be paid, because the whole business has become customary; the potter does not change his methods of work; he gets enough to enable him to live in the way to which he is accustomed, and the price paid for each vessel is the normal price so far as that village is concerned. Some of the other village artisans offer similar examples, and further examples may perhaps be found even among the artisans of small and unprogressive towns. So long as the conditions of demand and supply are unchanged, the normal price of the commodity remains the same, and when it has become customary the price actually paid in each case is equal to the normal price.

If, now, the self-supporting village comes into relations with a town, and buying and selling begin, the potter is likely to be affected. In the first place, the town may want earthen vessels as well as the village, and the potter may

not have enough to supply every one. He would naturally sell what he has to his old customers in the village, but some of the townspeople will offer him a higher price, and he will take this from them, unless the villagers also are willing to pay a higher price. And so the increase in the demand breaks up what has become the old village custom, and the potter can get a higher price than that to which he was accustomed. On the other hand, the villagers may take to using brass vessels when they find that they can buy these in the town, and the demand for the potter's products may fall off in consequence. Or a potter may come and settle in the town, bringing a new kind of wheel and other appliances with which he can make better vessels, and make them in larger quantities than the village potter; he may sell to the villagers as well as the townspeople, and the village potter may find that he can no longer ask the old price, and may have to reduce it, and either work harder, or live worse, or copy the town potter's appliances.

These imaginary illustrations are intended to put in their simplest shape the kind of things that happen in the case of ordinary artisan industries, and that happen still more frequently in the larger industries carried on in the factory stage. For it is a matter of experience that processes and methods of production change, and that tastes and habits of consumers change also. It is usual to say that India changes very slowly in such matters, and this is true if the comparison is made with some western countries. but the changes occur all the same, and at the present time the speed at which they occur is certainly increasing. And when the changes occur, they affect the expenses of producing a commodity, and consequently alter its standard or normal price; so that though the normal price may be the same this year as last year, it is

unlikely to be the same this year as it was ten years ago

Students must look to the large treatises on Economics for an analysis of the working of the various causes that may change the price at which production and consumption come into equilibrium, here we can only give a few typical examples. It is fairly well known that the money-wages of agricultural labourers have been rising in recent years in various parts of India. The rise has directly affected the business of all cultivators, who have to pay higher wages than before for the same work; but it is felt most seriously in the case of those crops which require most labour. The cotton crop is one of these, its cultivation is not specially expensive, but many labourers have to be hired to go over the field from time to time and pick the cotton as it ripens, and consequently the money paid in wages represents a relatively large proportion of the expenses of producing the raw cotton. The rise in the wages of labourers has therefore increased the expenses of producing cotton more than the expenses of producing some other crops such as food-grains and consequently large numbers of cultivators, who in the past were doubtful whether to use their land for cotton or for food-grains, are now more inclined to grow food-grains, because they cost less in labour. This would mean a reduction in the area under cotton, and in order to get the amount of cotton they require, growers have to offer a rather higher price than they would otherwise have done, in order to make it worth the cultivators' while to grow the crop. The actual price may vary from day to day or week to week, but the normal price (to which the actual price tends to return) will be higher than it would have been if labourers' wages had not risen.

But this is only the beginning. The cotton-ginners work in the localities where the cotton is grown, and hire many of their workmen from among the agricultural labourers, and they find that they have to pay higher wages in order to get the labourers they need. So the expenses of producing cleaned cotton are raised in two ways in consequence of the rise in wages; and its normal price must rise if spinners are to get the quantity of cleaned cotton that they need. But cotton-spinners, too, find that they have to pay higher wages than they used, and in the same way the normal price of cotton-yarn must rise, so that it may cover the extra expenses of (1) the cultivators, (2) the ginners, and (3) the spinners; and we might carry the illustration further to show that the normal price of clothes must rise to cover, not only the extra cost of yarn, but also the higher wages paid to weavers, and to dyers and tailors.

If then there were no other changes to take into account, we should be able to trace the effect on the normal price of clothes of a rise in the wages of the various classes of labourers and workmen employed in their production. But it is very seldom, indeed, that the world stands still long enough for us to watch the effect of a single cause like this, and many other changes have been taking place at the same time. Thus, the labourers whose wages have risen can now spend more money on clothes, and, since large numbers of them are still insufficiently clothed, this may mean a large increase in the demand for cotton clothes, and as the demand has risen, the equilibrium-price must be different from what it was. On the other hand, railways have been built and have made it possible to bring cleaned cotton to the spinning-mills from large areas where the cost of carriage was formerly excessive. This means a large increase in the supply of cleaned cotton, and this

would tend to reduce the price which spinners must pay, and consequently reduce the expenses of producing cotton-yarn, a change which will tend to reduce the normal price of cotton-clothes. And at the same time, probably better spinning machinery has been introduced, the price of coal for fuel has probably changed, and many other alterations in the conditions, both of production and consumption, have probably taken place. While, therefore, we recognise that the normal price of cotton clothes is equal to the expenses of producing them, we must also recognise that these expenses are themselves liable to change, and that thus the normal price is not likely to remain fixed for any considerable time.

Let us take another example from the trade in kerosene oil. The use of this oil in northern India is comparatively recent. formerly light was obtained universally, as it still is in many villages, by burning one of the oils produced from seeds grown locally. When kerosene oil first came into use, it was sent up country packed in tins, and the tins placed in boxes, just as the better qualities of oil are still transported. This method of packing is expensive, and the cost of carrying the oil so packed by rail is considerable, it will be remembered that production includes the transport of commodities to the place where they are wanted for consumption, and consequently these expenses are included in the expenses of production when the oil is sold up-country. At first, therefore, the price was high, and the oil was used by only a few people. But it satisfied a want, and its use increased until it became worth the producers' while to introduce new appliances that would reduce very largely the expenses of transportation. All readers must have seen some of the oil-depots which have been set up along the railways during the last few years :

the oil is pumped into tanks placed on trucks, and these trucks are brought up-country by train, and the oil pumped from them into the tanks at the depots. Thus, almost all the expenses of packing are saved, and the expenses of freight are greatly reduced. consequently the expenses of producing the oil in the various towns along the railways have been greatly reduced, and the oil can be sold much more cheaply than was formerly the case.

Here again we have only noticed a single cause operating to change the expenses of production. The recent history of the oil-trade in India has to deal with many other causes, some tending to raise and others to lower the normal price, but they are rather too complicated to go into here.

As we have said above, we do not intend to attempt an analysis of the causes that may affect the normal prices of commodities. The subject is difficult, and it is better that students should first pass on to an elementary study of the subject of Distribution, but a few words may be said here to indicate one of the main causes of difficulty, namely the element of time. If we confine our attention to a particular day or week, we can, in the case of most commodities, make a fairly close calculation of the expenses of production, that is of the normal price, as it existed on that day or in that week. But when we look at a longer period, the calculation becomes more and more difficult, because changes have taken place gradually during it, and the normal price at its end is not the same as the normal price at the beginning. Few economic causes produce their full effect immediately, and some of them may operate gradually over a period of many years; so that when we consider the effects that will result from a particular cause, we have to direct our attention especially to the period of time that is required for the effects to be produced. Students will not

feel the resulting difficulty until they attempt to master a full analysis of the problem of equilibrium, such as will be found in the larger text-books ; but it is well for them to know that this question of time constitutes one of the chief difficulties that lie before them.

CHAPTER XXXI.

CONCLUSIONS.

At the beginning of this Book we stated the central problem of the science of Economics in the following terms :

How does it come about that a particular quantity of any commodity is produced and sold at a particular price ? In what way is the quantity determined, and how is the price fixed ?

The answer at which we have arrived may be set out as follows :

(1) In any market where a commodity is bought and sold, the quantity demanded tends to decrease as the price rises, and to increase as the price falls.

(2) On the other hand, the quantity offered for sale (that is, the supply) tends to increase as the price rises, and to decrease as the price falls

(3) The effect of the bargaining that takes place in the market is to settle the equilibrium-price, that is to say the price at which the amount demanded is equal to the amount supplied.

(4) The market-price so settled may vary from day to day, but so long as the conditions of production and consumption are unaltered it tends, in the case of ordinary commodities, to be equal to the expenses of production, because when it diverges from that amount

causes come into operation to bring the market-price back to it. The standard or normal price is thus equal to the expenses of production for the time being.

(We indicated that this conclusion may not apply in cases where the production of a commodity is in the hands of a Monopoly, but left that subject for study at a later stage. We also indicated a possible exception to the rule in the case of some Indian artisans, but the study of that exception also was postponed.)

(5) The conditions of production and consumption are, as a matter of fact, constantly changing; these changes result in changes in the expenses of production, and, therefore, the normal price is itself liable to change. The further analysis of changes in normal prices was deferred for later study, but attention was directed to the difficulty caused by the element of time.

It will be seen that no simple answer can be given to the question with which we started. Life is complicated, and as time goes on its complications tend to increase; and a science like Economics, which deals with a large part of life, cannot be made entirely simple, because at any moment numerous causes are in operation, some working in one direction and some working in another. We can, as a rule, observe only the single result that follows from these numerous causes, and, in order to understand that result, we have to trace out the working of the various causes, one by one, and see how far each has contributed to the result. Ordinary people are not inclined to take all this trouble, and are apt to be satisfied when they have found a single cause that seems likely to have contributed to the observed result. For instance, we observe that at the present time the prices of food-grains in India are higher than they used to be, and the ordinary man is inclined to pick out some

single cause, which he knows to be in operation, and attribute the whole result to that cause. Thus we may find newspaper-writers confidently attributing the rise in prices to the weather, or to the construction of railways, or to the development of the export trade, or to any one of a dozen or more processes which are known to be going on, and which seem at first sight to explain the whole thing. But life is not so simple as all that, and the person who really wants to understand any economic result has to study *all* the causes that have in any way contributed to it, or that seem likely to be connected with it in any way, and to determine so far as he can the share that each has taken in producing the result. And since many processes which look like causes are themselves the result of other causes, he has to study the causes of these causes in the same way. A rise in wages may be one of the causes of a rise in price, but the rise in wages is itself the result of other causes (as we shall see in the next Book), and each of these has to be studied before the final result is fully understood.

Now, our minds are not able to study a large number of causes at once. we know this by experience. The economist has to follow the same course as students of other sciences, and study one cause at a time. He assumes for the purposes of study that only a single cause is at work, and he studies what the result would be if that cause were to work without interference from other causes, he then studies the other causes, one by one, in the same way, seeing which causes work in the same direction as the cause first studied, and which causes work in another direction, and so tend to counteract it; and at last he arrives at a conclusion, which may approach more or less nearly to the actual truth, as to the explanation of the result which has been the subject of his study. He is then in a position

to forecast, with more or less accuracy, how the result will be affected by changes in the strength of one or other of the causes at work.

The argument in the present Book may be taken as an example of this method of study. We began by examining what happens in a market with a variety of restrictions that are not often found in actual life, and we saw how in those conditions an equilibrium-price would be determined by the operations of the market. We then extended the study by seeing what would happen if some of these restrictions were removed, and so got gradually nearer the truth. Then we turned to a new set of causes, the study of which showed us that there is a standard or normal price to which the market-price tends to return and then we turned to still another set of causes showing that this normal price is itself subject to change. We are not yet at the conclusion of the investigation we have left for the future, for one thing, the study of the effects of Monopolies, a study of great practical importance, and we have also postponed the detailed examination of the causes that lead to alterations in normal prices. The answer, then, that we have given to the question under investigation is not yet complete, but is only an approximation to the truth.

When economists are engaged on an investigation of this kind, it is their duty to make quite plain what they are doing. Thus, when they are studying a single cause, and assuming that no other causes are at work, they use, or should use, the phrase, 'Other things being equal,' or some other words which make plain to a reader, if he is careful, just what is being done. But some writers, and especially some of the earlier writers, such as Ricardo, have not always been careful to do this, and have made certain assumptions which they have not stated in words. Students

have, therefore, to be on the look-out for such assumptions : they must know just what the writer is assuming for the moment ; and when they are sufficiently advanced to read some of the classical writers on the subject, they must be prepared to find that the assumptions are not clearly stated, and that they must find out for themselves exactly what is assumed.

One assumption is so important in connection with normal prices that it is well to mention it again, although it has been specified in Chapter IV. ; we are assuming throughout that the purchasing power of money remains unchanged. So far as fluctuations in market-prices are concerned, this assumption is in accordance with the facts, since changes in purchasing power do not occur so rapidly as to affect the argument materially. But when we are considering changes in the normal price, we have usually to examine a period of such duration that the purchasing power of money may have altered materially, and if we overlook such an alteration we may be seriously misled. For the present, it is enough for students to remember that the assumption has been made ; when they have advanced further in their course they will find that the necessity of making the assumption can be avoided by considering normal values instead of normal prices, and that this course is commonly adopted in the larger works on Economics.

We have described the subject-matter of this Book as the central problem of the science. The reason for saying this is found in the fact that the equilibrium between supply and demand, which we have so far studied only in connection with commodities, will be found to exist also in relation to the various factors of production, and to explain how the remuneration of each factor is determined. In other words, we shall find that the wages of labourers, the interest paid

for capital, the earnings of employees and business-men, and the rent of land are all very closely connected with the supply and demand for these different factors. The next Book will deal with these questions, which are grouped together under the name *Distribution of Wealth*.

We are not yet, however, in a position to give a complete theory of *Distribution*. Such a theory must depend on a more exhaustive study of the equilibrium of supply and demand than we have attempted, and all that can be done with our present knowledge is to indicate the processes by which the various factors of production have come to resemble commodities in many important aspects, and also the main features of difference that exist between the two classes. A preliminary account of this kind will not enable students to understand fully the causes that determine the rate of wages or rent or interest, but it will enable them to appreciate the objects and the importance of the fuller study of supply and demand that lies before them.

BOOK V.

DISTRIBUTION.

CHAPTER XXXII.

INTRODUCTORY

WE have seen that certain Factors have to be employed in order to produce Wealth , and we have now to examine the way in which the wealth when produced is distributed among the people who have furnished the different factors. This section of the science is spoken of as Distribution.

It is possible to imagine cases in which the question of distribution does not arise, though it is very hard to find such cases in actual existence. If we suppose that a man lives by himself on land to which no one else has a claim, and produces without assistance all the wealth which he consumes, then no one else could make any claim to share in that wealth on the ground that he has helped to produce it , the man who produces keeps the whole produce. But such cases are very rare ; in all the stages of production which we can observe we find that the necessary factors are provided by more persons than one, and that the persons who provide the different factors receive a share in the produce to recompense them for the part which they have taken in production. Thus in the self-supporting stage of production the cultivator, who conducts the business, also supplies most or all of the capital and a large part of the labour ; but the land is usually provided by the land-holder, who claims rent for its use , the

labourers and artisans who are employed claim wages in return for the labour they contribute ; and if the cultivator has borrowed capital, the lender claims interest for its use. Similarly in the artisan-stage, the artisan who conducts the business also provides some of the labour and capital employed , but he has to pay rent if he has hired a house or land, he has to pay wages if he employs labourers, and he has to pay interest on the capital he has borrowed. And in the factory-stage, the owners of the factory have to pay rent, wages, and interest in precisely the same way. The reason why such payments have to be made is simply that people as a rule will not do things for nothing . ordinary men who possess land or capital want some remuneration for their use, just as labourers want wages in return for their work , and the questions with which we are now concerned relate to the amount of the remuneration that is paid to the persons who provide the various factors.

When a commodity has been produced, the price received for it has to meet claims on account of

- (1) Interest.
- (2) Rent.
- (3) Wages.
- (4) Earnings of Management.

The problems of Distribution are concerned with the manner in which the amount of these claims is determined ; but there are other claims also on the price received, and we must notice briefly

- (5) Replacing the capital consumed in the production.
- (6) Taxation

The necessity of replacing the capital consumed is obvious so far as circulating capital is concerned When a weaver sells a piece of cloth, the price has to cover the cost of the yarn which he has used in making it the cultivator has

to replace the grain which he has used for seed ; a sugar-factory has to make good what it has paid for materials and fuel, as well as for wages. But the consumption of fixed capital has also to be allowed for. Buildings, machines or tools do not last for ever, but wear out gradually, and a time comes when they have to be replaced , if a producer does not provide for their replacement out of his produce, but distributes all of it under other heads, a time must come when his production is brought to a standstill because his fixed capital is used up. In all well-conducted enterprises, therefore, a suitable share of the produce is set aside periodically to make good the deterioration of the fixed capital ; thus when the accounts of a factory are made up for the year or half-year, a sum is set aside under the name of depreciation before the earnings are calculated. The need for such a provision is indeed frequently overlooked by producers in a small way of business, and this omission is a common cause of their financial ruin. If we take the case of a cultivator who has bought a pair of bullocks for fifty rupees, and who counts on them to do his work for ten years, it is easy to see that he should set aside five rupees¹ out of his produce each year, so that in

¹ Strictly speaking, less than five rupees would suffice if he could invest the money and get interest on it until it is needed ; he would have to put aside annually such a sum as would amount to fifty rupees at the end of ten years. But where a cultivator has not access to a bank, as is still generally the case in India, it is not easy for him to put small sums out at interest in this way.

On the other hand, he would be wise to put something extra aside by way of Insurance against the risk that his cattle may die before the ten years have expired , if they die after six years, he will only have thirty rupees available to replace them. Most forms of enterprise provide in one way or another for insurance against certain risks of this kind, and the subject is discussed at length in the larger treatises on Economics , but we are leaving it out of account for the present in order to simplify as far as possible a problem which is in any case complicated.

ten years' time he may have the money to buy another pair; but as a matter of fact cultivators very often fail to provide the money for replacing their capital, and when their cattle die they have either to borrow fresh capital to replace them, or if they cannot do this they have to leave their holding, which is their means of livelihood.

Thus the wealth produced has first of all to make good the capital consumed in its production, whether the capital is circulating, that is, consumed in a single operation, or whether it is fixed and wears out gradually. The balance left after doing this is the amount available for distribution.

The other item, taxation, represents the amount that has to be paid to government or to local authorities such as municipalities. This amount is determined directly by legislation and not by economic causes; the economic effects of taxation may be very important, and these are usually considered in a special department of the science, but for our present purpose it is enough to note that part of the wealth produced may have to be paid away in the form of taxes or rates, and is not available for distribution among the factors of production.

Excluding these two items, the remaining four represent the claims of these factors, interest for capital, rent for land, wages for labour, and earnings for the person who undertakes the business of production. As we have seen in a former chapter, Production can be organised in more ways than one, and a theory of Distribution can be worked out for any method of organisation that may come into existence, but we shall confine our attention to the method which exists in the present day, where a man (or a group of men) undertakes a productive enterprise, and hires the land, the labour, and the capital which is required in addition to any which he may himself contribute. We shall call

this man the Producer :¹ his position is distinguished by the fact that, while he pays for the land, labour and capital hired such sums as may be agreed, he keeps for himself what is left after making these payments, and thus derives no benefit for himself if his enterprise is a failure. Under this system of production, the questions that arise relate to Rent, Wages, Interest and Earnings

It will be noticed that the income which a producer derives from his enterprise usually amounts to something more than the earnings of his management ; it includes also the remuneration due to each of the factors of production which he has contributed. When a cultivator, for instance, has paid his rent and interest and the wages due to his labourers, the balance of the produce in his hands is not due solely to his conduct of the business . he has laboured on the land, at least as hard as any of the labourers whom he has paid, and a share of the income is due to his labour , another share is due to his capital which he has employed, and we may say that the income that is left to him consists partly of wages, partly of interest, and partly of earnings of management . And in the same way a man who owns and manages a factory has a claim both for the capital invested in the factory and for his own work as manager ; his income is made up of these two elements.²

¹ English writers have at various times used different names for this man ; his position is exactly described by the French word *entrepreneur*, and some English writers use the word 'undertaker,' which is its English equivalent . Unfortunately in ordinary English the word 'undertaker' has acquired the special meaning of a man who conducts funerals, and its use in any other sense is at present somewhat incongruous

² At the period when the science of Economics was being worked out in Western Europe, it so happened that most of the existing production was carried on by men who supplied some part at least of the capital used, and at first a distinction was not clearly drawn

The producer is not the only man whose income may be derived from two or more sources. When a landholder lends capital to his tenants, he charges interest on the loan quite apart from the rent on the land, so that his income is made up partly of rent and partly of interest. When he invests capital in improving the land, he also charges the tenants with interest; in this case, however, the charge is usually made in the form of an addition to the rent, and consequently we find tenants paying under the name of rent a sum which represents partly rent in the strict sense and partly interest on capital. For some purposes the economist has to distinguish between these two items, because the laws that determine the amount of rent are not the same as those which determine the amount of interest.

Thus the economist cannot always discuss men's incomes as a whole; he has to examine the sources from which the income is obtained, and must give separate consideration to the part earned by each separate factor of production. And on the other hand, he has to be careful to include in his examination all that is really earned. The remuneration of some people is made in such a way that part of it may easily be overlooked. For instance, in some parts of India a groom gets wages of three rupees a month, and a careless person might take this sum as representing his income; but such a man usually gets, in addition to the money,

between their earnings and the interest on their capital, their whole income was described as Profits. But as the study of the subject advanced, it was found that no satisfactory theory could be stated regarding the rate of profits, because the two elements (earnings and interest) which compose it are not determined by the same laws. It was thus found necessary to distinguish between the two elements, even when both are taken by one man, and where the older writers discuss profits, most modern books contain separate discussions of interest and earnings.

free lodging for himself and his family, a certain amount of grain for food, a blanket for the winter, and perhaps some other items. All these must be taken into account in calculating the income that he receives as remuneration for his work, and not merely the money that is paid to him, and the same is true of all persons who obtain benefits apart from the money that is paid directly to them, whether those benefits take the form of a house free of rent, a pension in old age, free medical attendance, or whatever the benefit may be so long as its value can be stated in terms of money.

In examining then the distribution of wealth, the economist considers the whole of what each man gets for each single factor of production that he provides; where men provide only a single factor, he can concern himself directly with their total income, but when they provide more factors than one he must concern himself separately with the parts of their income due to each factor. We proceed to consider in this way the causes that influence the rates of interest, rent, and wages and other earnings. We shall find in this study that the factors of production can be regarded very much in the same way as we regarded commodities in the preceding Book: there is equilibrium between the supply and demand in regard to land, labour and capital just as there is in regard to commodities, the rate of rent, or of interest, or of wages being regarded as the price paid for the services of those factors. But at the same time there are special features to be allowed for in the case of each factor, so that neither land nor labour nor capital can be regarded simply as a commodity.

There is an apparent distinction between commodities and the factors of production that may be noticed before we enter on the discussion which has been indicated above. As a matter of fact, at the present day most commodities

are obtained by a single payment representing the price, while the payments for the factors of production are as a rule made periodically and depend in amount on the time for which the factor is used, in other words, most commodities are bought, but most factors of production are hired. This apparent distinction is, however, of little or no importance. On the one hand the hiring of commodities is by no means uncommon though it is not so common as buying, we constantly hire conveyances of various sorts, we hire houses to live in, and sometimes we hire things like furniture or cooking vessels for temporary use. On the other hand land may be bought for use in production, though as a matter of fact it is more commonly hired, while slaves could be bought in India not very long ago, and can still be bought in some parts of the world, and employed as labourers in production. The distinction between buying and hiring then does not in fact mark a difference between commodities and factors of production, and at the present stage students can safely leave it out of account. We have to consider the way in which the payments made for the factors of production are determined, and it does not matter that these payments are made periodically instead of being made once for all.

CHAPTER XXXIII.

INTEREST ON CAPITAL.

WE do not know exactly when the practice of paying interest for the use of capital arose in India. We have seen in Chapter XII that it cannot have arisen until the process of saving had begun, because the stock of accumulated wealth from which capital is drawn depends on saving for its existence. It seems probable that when saving had begun, people at first used their wealth mainly as capital in their own business, and that the practice of lending it to other people on interest came gradually into existence; we do not know for certain that this was the case, but we will assume that it was, and we will take an imaginary illustration from a very early period of the process, which will throw light on the nature of the transaction which we are considering.

We will suppose that a cultivator's plough-bullocks have died suddenly, and that he has not got any accumulated wealth which he can use to buy new ones. He knows that a neighbour has saved up a considerable stock of grain, and he asks that neighbour to lend him enough of it to buy the cattle which he needs. The neighbour replies that he wants to spend the grain for his own satisfaction, say in building a new house for himself: the cultivator urges that he does not want the new house at once, but could

wait for a year until the loan has been returned. The neighbour in answer to this asks, *Why should I wait?*

The cultivator can reply in one of two ways; he may urge that they are relatives or old friends, and that his need is very great because he cannot live unless he ploughs his land, and if his neighbour listens to these arguments, the loan is given as a matter of friendship or charity, and the question of interest does not arise. But on the other hand, the neighbour may not be inclined to act charitably, and the cultivator may say: "I will make it worth your while to wait, because next year I will give you back more grain than you lend," and after bargaining, the loan may be arranged on condition that twenty-five maunds of grain are advanced, and thirty maunds are to be repaid after a year. This is a loan of capital at twenty per cent. for a year.

Students may well consider this illustration in some detail, because it brings out clearly the fundamental facts of a loan at interest. The borrower wants the immediate use of a certain amount of wealth, and in order to satisfy his want he is willing to pay something at a future time: the want is just like those wants which we considered in Book III, and he will give some wealth in order to satisfy it, just as a man gives a rupee to buy a ser of *ghr*. The lender on the other hand is in possession of wealth which he could use to satisfy some of his wants, but he decides that some more wealth received in a year's time will enable him to obtain more satisfaction on the whole than if he spends his existing stock at once; it is worth his while to wait, because he will be able to satisfy more wants in a year's time than he could satisfy now; he will secure more satisfaction by waiting than by spending at once.

We have supposed above that there is bargaining between

the two parties before the amount to be paid as interest is settled : it is obvious that their position in this respect is the same as that of buyers and sellers of a commodity. The borrower naturally wants to pay as little as possible, and there is a limit to the amount which he will pay, just as there is in the case of a purchaser. If the borrower should find, for instance, that he would have to pay twice the loan as interest, he might decide that the charge was greater than he could possibly hope to pay, and no loan would be made. and even though he calculates that he could manage to pay fifty per cent. as interest, he will not offer to pay so much if there is any chance of the lender being content with less. The lender on the other hand wants the highest possible interest. there is a limit below which he will not lend, but he will take more than this limit if he can get it

Even then in such isolated transactions at an early period in the organisation of production, a loan of capital is settled in very much the same way as the sale of a commodity. At this stage there is of course no regular market, if—as we have assumed—such transactions are at first rare ; and in fact a market for capital can scarcely be said to exist even now in many of the villages of India. The development that has taken place has, as in other matters, been the growth of customs, differing in detail from village to village. It is obvious that a man who has once made a loan and had it repaid with interest will in many cases be ready to make further loans, and as time goes on his family may develop a regular money-lending business, while cultivators who want capital will naturally apply to a man who is known to have lent money before. We can thus see how the existing conditions in villages have grown up a large number of the inhabitants want

to borrow money from time to time, and there are a few men (perhaps there is only one in a village) ready to lend money provided they can get a rate of interest which they consider satisfactory. The position of these money-lenders is very similar to that of the retail traders, whom we considered in Chapter XXVIII: they fix the rate of interest which they charge, just as retailers fix their prices of grain, but the rate is limited by the fact that if it is too high fewer loans will be made, and their income from interest will be reduced. While then such money-lenders have usually customary or standard rates of interest, they modify their charges in accordance with changes in the demand for capital: they will lend money below their customary rates rather than keep it unemployed, and they will charge more than usual at times when the demand for money is great.

There is then no regular market for capital in ordinary villages, just as there is in them no regular market for grain or other produce. To find a market for capital we must go to the cities and towns. In them we find the conditions which constitute a market: on the one side a large number of people anxious to borrow, and to get the capital they require at the lowest possible rate; and on the other side a number of people with money to lend, and anxious to get the highest possible rate of interest on it. The lenders consist mainly of the banks, which have been described in Chapter XVI: a large part of their business consists, as we have seen, in collecting the savings of individuals and lending the sums collected so as to make a profit. A bank which is paying interest on the money which it holds obviously cannot make a profit unless it lends that money at a higher interest than it is paying; and consequently every bank wishes to have as much as

possible of its money lent out at the highest rate of interest which it can get, keeping in its hands only enough to meet the claims of those depositors who may want their money back at once. The banks, therefore, as lenders are in a position similar to that of the sellers in the market of a commodity, they want to lend their money just as the sellers want to sell their grain; but they want to get the highest possible rate for their loans, just as the sellers want to get the highest possible prices for their grain; and they compete with one another in the attempt to secure what they want.

The borrowers include all the persons who want money for any purpose; these purposes are very various, but the feature common to all is that the borrowers want to pay as low a rate of interest as possible. The borrowers are thus competing among themselves for the money that is available, while the banks are competing to lend the money which they possess; and we thus find all the features of an organised market, just like the wholesale wheat-market which we described in the previous Book.

Following the ordinary use of language, we have spoken of the transactions carried out in such a market as made in money. It is in fact rare for a producer to borrow the actual capital which he needs; as a rule, he borrows money with which to provide that capital. The cultivator in our opening illustration did not want the wheat he borrowed for use as wheat; he wanted cattle, and he borrowed the wheat to give in exchange for them. In the same way a man who wants to set up a factory does not borrow the particular items of capital which he needs, the bricks, mortar, timber, machinery and so on; he borrows money to pay for these. We have excluded a discussion of the meaning of money from this introductory course, but

students are already familiar with the fact that the word means something more than pieces of coined metal, and that a man who borrows a lakh of rupees no longer needs to have a cart loaded with the silver coins, but can handle the loan in various convenient ways. This knowledge is sufficient for our present purpose, and we shall continue in this chapter to speak of the transactions we are considering in terms of money, remembering that it is not the money which borrowers really want but the various things which the money can be used to pay for.

One point in this market for money deserves special notice. In discussing the wheat-market, we saw that dealers have to pay constant attention to the conditions of supply and demand in other places, because wheat can be taken from one place to another and will ordinarily be taken for sale to those places where the price is highest. But it is much more easy to move money than it is to move wheat or some similar commodity; students will not realise the truth of this statement fully until they have mastered the subject of Credit, but it is obvious that a lakh of rupees can be sent say from Calcutta to Cawnpore in the form of currency notes very much more cheaply and quickly than wheat to the same value could be transported. And even currency notes are comparatively a clumsy method of transferring money from one market to another with the existing organisation of banking and credit, a telegram of a very few words is enough to transfer the largest sums from Calcutta to Cawnpore, or Bombay, or Rangoon, or London. In this way money can be sent to any part of the world where at the moment it can earn the highest profit, and a banker in Cawnpore or Delhi has to know the conditions regarding supply and demand which prevail not merely in the cities of India but in other countries such

as England, and America, and Japan Thus the market in question is even more highly organised than the market for wheat, but the organisation is of the same kind Let us examine in a little more detail the conditions of supply and demand in such a market

We have seen that in a market for commodities the general law is that the amount demanded falls when the price rises, and rises when the price falls This is equally true as regards money. Borrowers want money for a large variety of purposes, but most of it is wanted in order to make a profit by using it in production, and producers will, as a rule, employ more and more money so long as they can get a profit by its use The individual producer is constantly asking himself the question Can I employ more capital with advantage or not? He calculates, for example, that he can increase his income by two thousand rupees a year if he employs ten thousand rupees in setting up certain new machines he knows that in order to provide for depreciation he should set aside one thousand rupees yearly from the additional income, and he has to see if it is worth his while to set up the machines for the sake of the income of one thousand rupees that is left when this provision has been made The answer clearly depends on the rate of interest which he has to pay for the loan if he can get it at four per cent, he will have six hundred rupees left for himself as earnings, and he will almost certainly make the investment; while if he finds that he would have to pay ten per cent, he sees that there would be nothing left for himself after paying the interest, and he will not, as a rule, think this worth his while If we suppose that he can get the money for something less than ten per cent, so that he can hope to earn a small sum, say fifty or a

hundred rupees a year, his course of action is doubtful: some men would think it is just worth their while to buy the machines, and others would, after hesitating, decide against it

In the same way, the extent to which money is borrowed for dealers' transactions depends very largely on the rate of interest. A dealer, for instance, who buys wheat from cultivators at harvest, must as a rule have money to pay the price in cash for each lot of wheat that he buys. He may calculate that by buying wheat in the villages and selling it in a distant market, he can make a profit of two rupees per cent in two months after paying all necessary expenses such as the cost of carrying the wheat from the villages to the market. Is it worth while to borrow money in order to carry out this transaction? Two rupees per cent for two months is at the rate of twelve per cent. for a year, and if the dealer finds that he would have to pay twelve per cent. or more for a loan, he obviously will not borrow. On the other hand, he would probably borrow a large sum if he could get it for four per cent., while when the rate is about ten per cent., he will be doubtful whether it is worth his while to borrow or not, and different dealers will decide this question in different ways.

Almost all classes of borrowers then are in the same position. There is an upper limit at which they will not borrow at all, because there would be nothing left for them after paying interest at that rate. This limit is not the same for all borrowers; it varies with the nature of the transaction, but whatever it may be, the general fact remains that when the rate is below this limit, the lower it is, the readier will men be to borrow. Thus in a large market, whatever the rate may be, there will always be men who

are hesitating whether to borrow or not, and other men ; hesitating as to the amount they will borrow ; and even a small change in the rate will affect their decision. So far then as the demand is concerned, money can be regarded as a commodity, and the general Law of Demand applies to it.

Turning now to the question of supply, the money that is ready to be lent at any moment is almost entirely in the hands of the banks and of those firms which do banking business without calling themselves banks. At very low rates, some or all of these institutions will not lend money at all ; and the higher the rate which can be got, the more ready will they be to lend in larger and larger amounts. It is easy to see, therefore, that the supply of money in the market will be increased when the rate rises, just as the amount of wheat offered for sale is increased when the price is raised, in fact, it is easier to increase the supply of money than of wheat for the reason (which has already been mentioned) that money can be moved from place to place more easily and more quickly than wheat. Thus on the one hand we have a number of borrowers anxious to borrow at the cheapest possible rate, and on the other hand a number of lenders anxious to get the highest rate they can ; and the bargaining that goes on between the individuals determines for the moment the market rate of *net interest*, at the point where the Demand and the Supply are equal.

The expression *net interest* which we have just used draws attention to an apparent difference between interest and prices, which will be explained in the next chapter.

CHAPTER XXXIV.

INTEREST (*Continued*).

STUDENTS will remember that when we were describing a market for commodities, we laid stress on the fact that though the price may change very rapidly, there is at any moment only one equilibrium-price wheat, for instance, cannot stand at the same moment at sixteen and at fourteen sors. A slight knowledge of the market for capital suggests that this is not true in the case of interest. Some men will be borrowing at five per cent, while others have to pay eight or ten or twelve per cent, and it looks as if there were no such thing as a market rate of interest, corresponding to the market price of wheat. The reason for this apparent difference is to be found in the fact that what is called interest in everyday talk includes not only payment for the use of capital, but also payments of other kinds. Economists thus find it convenient to draw a distinction between *gross* and *net* interest. *Gross interest* is what we mean by interest in ordinary talk, the whole amount that a borrower has to pay, while *net interest* is that portion of the gross interest which is paid simply for the use of capital.

Gross interest ordinarily includes payments on account of two items in addition to net interest. One of these is insurance against the risk that the borrower will not return the capital when it is due. The seller of a commodity has

not to consider a question of this kind, because his transaction is complete when the commodity has been delivered and its price has been received ; but a loan of capital is a transaction extending over a considerable period of time, and it may happen that during this time the position of the borrower changes so that he is unable to fulfil his promise to repay. If, for instance, he has borrowed in order to buy machinery, he may find that the machinery he has bought is unsuitable, and yields him no profit ; or if he has borrowed to buy grain or other produce, prices may have fallen so much that he has lost money instead of gaining it by his transactions. There is thus a risk that the borrower may be unable to return the capital ; and the lender guards himself against this risk by charging in every case something more than the net interest. If we suppose that a man who has lent Rs. 10,000 in small sums to a large number of people charges each of them two per cent to cover this risk, then he hopes to receive Rs. 200 in a year in addition to the net interest. If he finds at the end of the year that all his capital is repaid, he has gained Rs. 200 ; while if his debtors are unable to pay Rs 500 in all he has lost Rs. 300

A moneylender or banker regulates the amount of his charge for insurance against risk according to the view he takes of the risk in the case of each borrower. If he knows that a particular borrower is both honest and prosperous, the charge he makes will be small ; if the borrower is not prosperous, the risk that he may be unable to repay becomes much greater, and the extra charge is much higher , while if the borrower is thought to be dishonest, and likely to refuse to pay when the time comes, no one will lend him money except at a very high charge indeed. In ordinary business a man's *credit* is said to be

good if people generally expect him to pay his debts, and bad if they think he will be either unwilling or unable to pay, and a man's credit may be measured by the amount that he is charged for loans. Again the charge for insurance will vary greatly according to the nature of the security that the borrower gives. Sometimes a loan may be given on what is called the personal security of the borrower, that is, simply on the borrower's promise to pay. Loans on the personal security of the borrower are naturally given only to men whose credit is good, and even then the charge is usually high because there is the risk that a man may become unable to pay even though he wishes to do so. Such a man can get a loan at a substantially lower charge if two or three other men, whose credit is also good, agree to be security for him, that is, to be responsible for the loan if he fails to pay. The charge is less in this case because there is much less risk that three or four persons will become unable to pay than that one man will default. Or a man may give some tangible security, which the lender can realise in case of default, he may pledge jewels, or mortgage a house or land, and if this security is easily realisable the charge for risk may be very low. But in practically all cases of loans to private persons the sum charged as interest includes a charge for insurance against risk in addition to the net interest.

The second kind of payment usually included in interest is a charge for the work done by the lender, in fact his earnings of management. It may vary according to the trouble that he has to take in each case, for instance, in making sure that a mortgage is legally valid, for storing jewels pledged to him so that they may not be stolen, for finding out how the borrower's credit stands, and so on. Thus to ascertain the net interest, we have to deduct from

the charge actually made something on account of insurance against risk, and something on account of earnings of management.

An example will make the relation of net to gross interest more easily understood. We will suppose that on a particular day a bank makes loans to different persons at 6, 8, 10 and 12 per cent., and we will also suppose that the bank charges in each case 2 per cent. on account of its earnings. Deducting this 2 per cent., we see that the various borrowers are paying 4, 6, 8 and 10 per cent. to cover both net interest and insurance. The rate of net interest is the same in the case of all the loans made at the same time, and we may take it at $3\frac{1}{2}$ per cent., and by deducting this sum we can see what each borrower is paying as insurance. The first borrower is only charged one-half per cent., and we may be sure that his credit is very good, and that he has given very satisfactory security. The others are charged respectively $2\frac{1}{2}$, $4\frac{1}{2}$ and $6\frac{1}{2}$ per cent by way of insurance. The manager of the bank has considered the credit of each of them and the nature of the security which each has offered, and has fixed these charges in the light of his experience so that, to the best of his judgment, the bank will not lose money in the long run by some of its debtors failing to pay, he knows that in the ordinary course of business some debtors will fail to pay, and he calculates that such losses will be just about covered by the charges which he makes.

It is then the market rate of *net interest* which is determined by the conditions of supply and demand that prevail at any moment in the market, and the gross interest, which individual borrowers have to pay, is made up of this net interest and of the other items that have been described above. It is not easy for students to know just

what the net rate is at any moment, because the market reports which are published in the newspapers do not distinguish the various items as we have done ; but an idea of its fluctuations during short periods can be got by watching the changes in what is known as the Bank Rate. From time to time each of the three Presidency Banks—(i.e. the Banks of Bengal, Bombay and Madras) announces the lowest rate at which it will lend money on perfectly good security. At one time, when the demand for capital is small compared with the supply, the bank rate may stand at four per cent or even as low as three per cent ; then when the conditions of supply and demand change, the rate may rise rapidly to six or seven per cent, and occasionally even higher. These changes in the bank rate indicate the changes in the market rate of net interest ; the net interest is less than the bank rate, because the latter includes charges for management, and a small charge for risk, but these do not vary greatly in a short period of time, and, consequently, it is safe to conclude that a rise of one per cent in the bank rate indicates a rise of about one per cent in the market rate of net interest.

In the case of a market for a commodity, we saw that at any given time there is a normal price to which the market price tends to return ; and in just the same way there is a normal rate of net interest. When the market rate rises, those persons who have been hesitating whether to borrow or not will decide not to do so, and in this way a rise in the rate will operate to reduce the demand for capital. On the other hand, a rise in the rate will make lenders more ready to lend ; and so the supply is increased while the demand is reduced. A rise in the market rate, therefore, affects the demand and the supply in such a way as to lead to a reduction in the rate, while a fall in

the rate, by inducing people to borrow and making lending less attractive, tends to make the rate rise again. The relation of the market rate to the normal rate is thus precisely the same as that of market to normal prices.

There is, however, one peculiarity that requires notice, namely, the variation in the rate of interest with the season of the year. A variation of this kind occurs in all countries where a large proportion of the circulating capital in use is employed in trade in agricultural produce, and it is especially noticeable in India, where this proportion is at present very high. A large variety of crops ripen in the same month: cultivators are anxious to sell their produce as soon as possible, and at each harvest there is a large demand for capital to buy the produce and transport it to the places where it will be consumed. This demand decreases when most of the produce has been dealt with; and so the demand for capital is much higher in some months than in others. In Calcutta, for instance, demand is slack and interest is low during the early part of the rains, and the bank rate at this period is low. As soon, however, as the jute crop ripens, money is wanted to deal with it, and the rate of interest, as a rule, rises rapidly; then more money is wanted for the rice crop in Bengal and Burma, while by the time the cold weather begins the Bombay market demands large sums to deal with the cotton crop. The bank rate (which, as we have seen, indicates the rate of net interest) is therefore generally high or very high during the winter. If the winter crops are good, there is a further large demand for capital to deal with wheat and oilseeds; but as soon as this demand is satisfied the bank rate falls again, and it is usually at a minimum in the rains until the next jute crop causes a fresh rise to begin. Students, therefore, who wish to follow

the movements in the rate of interest that takes place from month to month, must allow for the fact that the demand for capital varies very greatly with the season of the year, and also for the fact that it varies from year to year with the yield of the crops, and they will find that these variations account for changes in the bank rate, and are, in fact, put forward to explain such changes in the reports which most of the chief newspapers publish regarding the market in Calcutta or Bombay.

Lastly, the fact must be emphasised that while at any time there is a normal rate of interest to which the market rate tends to return, this normal rate does not remain fixed for a long period, but changes with the changing conditions of the country. We are not yet in a position to consider this subject in detail, students have first to master the movements in normal values, a subject of which the full consideration has been postponed (Chapter XXX), and then to apply their knowledge to the long-period movements in the rate of interest. For the present, all that can be done is to indicate some of the causes which may result in changes in the normal rate, leaving the study of these causes for the future.

It is easy to see that the demand for capital must increase with the progress of the organisation of production. We have seen in Book II that this organisation involves the employment of more and more capital, and that it depends on the supply of capital in sufficient quantity. If this tendency stood by itself, increased demand must bring a higher rate of interest, and the development of production must thereby be checked. But the tendency does not stand by itself, for while the demand for capital increases, the supply increases at the same time. The supply of capital depends, as we have seen, primarily on

people being able to save—that is, on their getting more wealth than is required for immediate consumption. The organisation of production increases the supply of wealth, and consequently makes it possible to save a larger amount. And while increased saving becomes possible, the progress of the country renders it at the same time more likely · people think more of the needs of the future, and realise the advantages of saving more clearly, and they also realise the advantages of employing their savings as capital instead of hoarding them in unproductive forms. Thus the prospect for the future is that both the demand for capital, and the supply of it, will increase; and the question whether the normal rate of interest will rise or fall depends on the relative speed in the increase of the supply and the demand. Some economists have looked forward to a time when the supply of capital will be so great that it cannot all be utilised in production, and it is conceivable that this may come to pass. On the other hand, the study of economic progress suggests that there may always be room for all the capital that becomes available, and, in any case, the need for more capital in India (and in other parts of Asia) is so enormous that the question whether it will ever be completely satisfied has no present interest for the student.

CHAPTER XXXV.

INTEREST (*Continued*)

WE must now resume our consideration of the rates of interest that are paid in Indian villages. We have seen in Book IV. that the retail price of a commodity such as wheat does, in fact, depend very largely on the wholesale price as settled in the large markets, and that the connection between the two prices is becoming closer with the development of means of communication: a similar statement cannot yet be made with regard to the rate charged for loans to cultivators, and one of the greatest needs of the country is the establishment of such a connection, so that the agricultural industry may have access to the great store of circulating capital which is controlled by the markets in the cities of India.

It is still, broadly speaking, true that there are no regular markets for the capital required for agriculture. Each village, or group of villages, depends for its supply on a few local moneylenders, and probably, in the majority of cases, these moneylenders are independent of the main banking-system of the country, each of them owns a certain amount of capital, and lends it at the highest rates he can obtain in the neighbourhood, but they do not think of obtaining additional capital from the banks when the amount which they possess is insufficient. The ordinary

cultivator is accustomed to deal with a particular money-lender, and it is not easy for him to leave that money-lender and go to another : custom, as we have seen, is a strong force in the villages, while a large proportion of the cultivators are, at any given time, in debt to their money-lender, and if one of them should attempt to leave him, he would at once be pressed for the money which he owed, and might be ruined by litigation. The net rate of interest, as determined in the city markets, has, in consequence, very little direct influence on the amount of gross interest which the cultivator pays ; he pays whatever rate is agreed upon with the moneylender with whom he deals. And, in bargaining for a loan, he does not meet the money-lender on equal terms, his need for money is urgent, and, as we have seen, he cannot go from one lender to another finding out who will lend at the lowest rate ; he has, therefore, very often to agree to whatever rate the moneylender chooses to fix, and the lender fixes the highest rate that a man who urgently needs money will agree to pay. The consequence is that the gross interest charged on capital lent for employment in agriculture is very high indeed in large parts of northern India it ranges from 25 to 50 per cent annually, and these very high rates are a serious check on the prosperity of the whole country. It is probably true that almost every cultivator in the country could increase his income substantially if he could borrow the capital he needs at even as much as twelve per cent., but the charge of 25 to 50 per cent makes it, in many cases, impossible to make a profit, and consequently the annual production of wealth in the country is very much less than it would be if capital could be borrowed on more reasonable terms.

This position is not peculiar to India ; the same thing

is more or less true in every country where the holdings are so small that cultivators cannot deal directly with the ordinary banks, and where special arrangements have not been organised for supplying the capital which they need. We have said in an earlier chapter that the ordinary banks cannot deal directly with the cultivator; but let us suppose for a moment that a bank decides to make the attempt, and opens branches say at the headquarters of each subdivision of a district. The manager of each branch will then have to fix his charges for loans in the way which has already been described: in addition to interest, in the strict sense of the word, he will have to charge something for the cost of management, and he will have to charge enough by way of insurance to secure the bank against the risk of loss. In order to do this, he will have to know the credit of each cultivator who comes for a loan; these men will come from several hundred villages, and the manager must know the position and the character of each. Now, even in a single village it is not easy to find out an individual's credit, and such a bank would have to keep up a very large staff to make the necessary enquiries, and would also have to take many more precautions against loss than suffice in its ordinary business. The charges for loans would therefore be high, because (1) the cost of management would be very large relatively to the amount of money lent, and (2) the charge for insurance against risk would be much higher than in ordinary banking.

We have taken this imaginary illustration in order to bring out clearly the fact that dealing with small cultivators is an expensive and risky business, and that, (if the gross charge for capital is to be kept down, some special arrangements must be organised to avoid the expense and the risk.) This is one of the chief aims of the system of

co-operative credit which is now being established in many parts of India. At a later stage students will have to pay close attention to this system, and, for the present, we will use it only as a further illustration of the nature of the interest that is paid in the villages.

It is now possible for a group of cultivators in a village to form a co-operative credit society, and when the society has been legally constituted it can borrow in a single transaction all the capital that its members require. Thus if fifty cultivators join the society, each of whom wants a loan, some wanting twenty rupees, some wanting thirty, and so on, to a total of Rs. 1,200, the society can borrow that sum and distribute it among its members. A bank or other lender will clearly find it much easier and much safer to lend to the society than to lend to its members individually: instead of fifty separate transactions it has only to enter into one, and it has only to consider the credit of the society as a whole, instead of the credit of each separate member. The lender can thus charge very much less for management; it costs him no more trouble to lend Rs. 1,200 than to lend Rs. 20, and in this way the existence of the society reduces the gross interest materially by reducing the charge for management. The charge for insurance against risk can also be reduced. It is a standing rule in these societies that each member is liable for all the society's debts, that is to say, if the society should fail to pay its debts, any single member might be made to pay the whole, if the other members could not contribute. Now people will not join in a society under this rule unless each of them trusts all the others, and the fact that a society is formed indicates by itself that all the members can be trusted to pay their debts in all ordinary circumstances, and, consequently, the credit of the society

is good. There are also numerous provisions in the system for ensuring that the societies shall be worthy of trust, and the result is that a loan to a society is attended with very little risk indeed, and the charge for insurance against risk need not be large. The gross interest, therefore, charged by lenders to such a society is very much less than they would charge to the individuals of whom the society is composed, it is less because both the charge for management and the charge for insurance against risk are very much reduced.

We must pass over the other features of the co-operative system, which are designed partly to strengthen the credit of the societies and partly to give them access as easily as possible to the stock of circulating capital which is in the hands of the banks. So far as the system succeeds, its result will be to make the interest charged to agriculturists depend on the market rate, very much in the same way as the price of wheat paid to the producer depends on the market-price of wheat. The individual cultivator will then, like the borrower in the city, pay gross interest, consisting of the market-rate of net interest with reasonable additions for cost of management and insurance against risk; and the village-markets for capital will be connected with the main markets of the country. While, therefore, we have to recognise that at the present time the rates of interest charged in the villages are not determined in the same way as the prices of commodities, we must also recognise that there is a tendency for them to be so determined, and we may fairly expect that as time goes on the position of capital will, in this respect, become more and more similar to that of a commodity, and that the resemblance which already exists between the rate of interest and the price of a commodity will become closer and closer.

So far, in this chapter, we have dealt with the question of capital in the villages ; but at the present time it is true that even in the towns and cities the artisans and other small producers borrow from moneylenders in much the same way as the cultivators, and that the rates which they pay are practically independent of the market-rate of net interest. But in their case too the co-operative system opens out a way of connecting them with the main market, so that there is a probability that the artisans like the cultivators will, as time goes on, come into touch with the market, and borrow on the terms rendered possible by the conditions of supply and demand.

We may now summarise our preliminary account of the causes that determine the rate of interest. Capital in India is not yet in the same position as a commodity, but it is gradually approaching to that condition. There is already a market for capital in the cities, in which the rate of net interest is determined by the conditions of supply and demand, very much as the price of a commodity is determined, and the gross interest charged to individual borrowers in these markets is made up of the net interest so determined, together with additions to cover cost of management and insurance against risk. The small producers, whether in the cities or in the villages, have not yet access to the main market for capital, and the rates which they pay are still more or less independent of the market-rate ; but this condition is not likely to be permanent, and the probability is that as time goes on the market-rate will have a wider and wider influence on the rates charged to all classes of borrowers. When, therefore, students have mastered the main theory of the equilibrium of supply and demand, they can apply its conclusions to the determination of the rate of interest as is done in the

English text-books on the subject. They have to remember that in India at the present day the rates charged on the capital borrowed by small producers are not, as a rule, determined in accordance with this theory, but still depend mainly on the power of the individual lenders; but, at the same time, this exception is likely to become of less importance as time goes on, and the theory will approximate more and more closely to the facts of Indian industrial conditions.

CHAPTER XXXVI.

RENT OF LAND.

WE have now to take up the next factor of production—Land—and see how far the rent¹ paid for it can be said to be determined like the price of a commodity by the conditions of supply and demand. In this discussion we shall confine our attention to agricultural land: rent of land required for other purposes is determined, to some extent, in the same way as that of land taken for cultivation, and the study of its peculiar features can be deferred to a later stage.

In the first place, we must recognise that though markets for agricultural land can now be said to exist in India, they have only recently come into existence, and their organisation is much less perfect than that of the markets for produce such as wheat. Before the Muhammadan conquest of northern India, the cultivator usually paid to the Raja, whose land he occupied, a share of the produce of his land at each harvest, but it would be a mistake to regard this payment as being merely rent paid for the right of occupying the land. It included rent in this sense,

¹ There is no reason why a man should not buy land to cultivate instead of hiring it, and this is in fact sometimes done, though the practice is rare in India. The price of land is, however, usually calculated either with regard to the rent which it will bring, or to the revenue which is charged on it, which bears a fixed relation to the rent; the market thus regards the rent as the real thing to be determined.

but it also included the cultivator's share of taxation. The Raja maintained some sort of government, and protected the cultivator (more or less completely) against cheats and robbers, and the payments made by cultivators formed part of the revenue expended on the government of the state. As a rule, a family remained in the possession of the same land from generation to generation, and paid the share of the produce as a matter of custom, and the question how the share was determined in those times was not a matter for discussion by economists. The Muhamadan rulers for the most part maintained this system of tenure, but changes in the share taken by them were made not infrequently thus at different times we find that cultivators were required to pay as little as one-tenth, or as much as one-third, or even one-half of their produce. Such changes in the rate charged were not determined directly by economic causes, they depended on the will of the Emperor, just as the amount of taxation is now determined by the will of the government; but, like taxation, these changes sometimes had important economic effects. In some cases, for instance, a cultivator might require more than half the annual produce of his land to keep himself, his family and his cattle alive; and when half the produce was taken by the State, such a man would not have enough produce left for his support, and he would probably abandon his land and look for some other means of livelihood. This fact was apparently more or less recognised at the time, and it imposed an economic limit on the share of the produce taken by the government. It was recognised that the share taken should not be so large as to cause cultivators to give up their land, but subject to this limit the cultivator's payments were regulated by the decision of the State, and not by economic causes.

It is on the whole correct to say that during these periods landholders did not exist in northern India, if we mean by the word landholder a person who has a right of property in a certain area of land, which he is free either to cultivate for himself or to let out to cultivators. The landholders came into existence ¹ mainly during the period of anarchy which covered the greater part of the eighteenth century, and then the development of markets for land became possible, because the supply of land was now in the hands of men whose income depends on the amount of rent which they can get for its occupation. We will look at the working of these markets and see how the level of rents in them is determined.

In this case we have to speak of the level of rents, and cannot speak of a single rate. There is, in fact, no general rate of rent in the sense in which we have spoken of a general rate of net interest. One rupee of capital is worth just as much as any other rupee; but, as we have seen in Book II., one acre of land may and in producing much more, or much less, wealth than another acre, and the amount of rent charged on each acre depends on its productive power. This fact is familiar to everyone who knows the rents of a village: it would probably be impossible to find a village of any size where the rent of every separate field works out at the same rate per acre. Thus, in northern India one usually finds the fields which have the best situation and are most fertile renting at from about eight to fifteen rupees the acre, and the rest of the land paying lower rates according to its quality, until we come to the

¹ This great social and economic change receives perhaps less attention than its importance merits in most text-books of Indian history. A sketch of its development has been attempted by the present writer in *The Revenue Administration of the United Provinces*.

poorest outlying fields, which may rent for a rupee an acre or less, and which are very commonly let free of rent or cultivated by the owner himself. When, therefore, we speak of a rise or fall in rents, we cannot refer to a single market-rate of rent, but have to remember that the rent varies with the quality and position of the land; a rise in rents means that all, or nearly all, of the various rates have increased, and a fall means that they have decreased.

The demand for land in the markets which we are considering comes from the people who want to use it for the growth of crops. The largest part of the population of northern India expects to make its livelihood by cultivation, and each family wants to occupy enough land to make this possible. The classes who live by cultivation are by temperament exceedingly conservative, and most of them will go on cultivating so long as they can make a living at all, rather than change to some other occupation, and, on the other hand, labourers who wish to improve their position endeavour to get land in their village to cultivate rather than go to work in the towns. At the same time, the people are not naturally inclined to take land at a distance from their home, they want it in the locality where they live, and they will pay a very high rent in that locality, though equally good land could be got elsewhere at a much lower rent. The consequence of these tendencies of the people is that there is not a large and well-developed market for land, there is rather a large number of small local markets, and the level of rents may at any time vary considerably from market to market. The demand for land in any locality will clearly increase as the population of the locality increases; for, as we have seen in Book II, the production from a given area of land cannot be increased to an indefinite

extent, but sooner or later the Law of Diminishing Returns comes into operation regarding it, and a point is reached where the expenditure of more labour and more capital on land already cultivated becomes unprofitable. In the greater part of northern India the rural population is now so dense that there is a keen demand; landholders have no difficulty in finding a cultivator for any land that falls vacant, while many cultivators have less land than they want, and many labourers are anxious to get land in order to start cultivation for themselves. The demand is of the kind with which we are already familiar, the higher the rent that is asked for land of a particular quality, the less will be the demand for it, that is, the demand decreases as the rent rises, and increases as the rent falls.

The supply of land will for a time increase as the rent rises, the offer of a higher rent may induce landholders to let for cultivation land which they have hitherto kept under forest, or have set aside for grazing or for sporting purposes; and so long as land remains available, the rent will be fixed by bargaining just like the price of a commodity, in such a way that the demand at that rent is equal to the supply. Up to this point then we can regard land as a commodity. the market is not, it is true, perfectly organised, and so the equilibrium-level of rents may not be exactly reached, but in any locality the tendency is for the rents to be determined in this way. At this stage, too, there would be a normal level of rents to which they would tend to return after each fluctuation of the market.

We need not, however, consider this stage in detail, because we have to take into account the special feature of the market which arises from the fact that the supply of land is limited in amount. As population goes on increasing, a time comes when all the land suitable for

cultivation is already let, and then there is no possibility of increasing the supply in order to meet an increase in the demand. The conditions are then entirely different from those that prevail in the case of a commodity, the supply of which can be increased indefinitely. This point has already been reached in the greater part of northern India, all the land fit for cultivation is already occupied, and the supply cannot be increased further.¹

To understand how rent is determined in these conditions, we must go back to the argument of the last Book and see what is the position in regard to bargaining when the supply is strictly limited. Let us consider the position in a pargana where all the land that can be cultivated is already let to cultivators, and let us suppose that the cultivators as a whole are just able to support themselves in the way of life to which they are habituated—that is to say, they are becoming neither richer nor poorer as a class (though probably some individuals with exceptional skill or diligence are getting richer, and others who are lazy or unskilful are getting poorer). In this position labourers who want to start cultivation, or cultivators who want more land, can be satisfied only by taking the land from the possession of someone else. Let us confine our attention to a single holding, and say that a new-comer offers thirty rupees where the present holder pays twenty-five. On the supposition already made, the present

¹ It is sometimes possible to increase the supply of fertile land by expending capital on reclaiming barren land. Thus, very large areas in the Panjab have been made fertile in recent years by the construction of canals for irrigation, and it is possible that methods may be found of reclaiming the large areas of shifting sand or heavy clay that are at present unproductive. But the effect of such improvements is temporary: as population continues to increase, the land so made available becomes occupied, and the position is then the same as before.

holder will see no chance of getting other land anywhere else in the neighbourhood, and in order to keep the land, which is his only means of support, he must offer to pay more than thirty rupees ; and if the newcomer bids thirty-five rupees, he must offer more, and so on. In such a position then, when the demand exceeds the supply, and when landholders are free to let their land to the highest bidder, rents will be raised *up to the highest level that cultivators will offer rather than abandon their land.*

It is not difficult to see what this level will be. The people who are competing for the possession of the land want it in order to make a living from it. It is obvious that they will not agree to take it at a rent so high that the income left after paying the rent will not suffice to keep them alive, but it is certain that, short of this limit, rents will be forced up to the highest possible rate. In countries like most parts of India, where there are few other means of livelihood open to a cultivator, and where the people, by custom and tradition, look to cultivation as the natural mode of life, they will pay a very large share of the produce in rent rather than leave the land, and may be left with only the barest necessities of life after they have paid for the labour and capital that they cannot do without. In such an economic condition then, the normal rent of land will be the entire produce that is left after deducting the necessary expenses of cultivation, including in this term the necessities of existence for the cultivator and his family ; the rent will be kept at this level by the pressure of people demanding land, the supply of which is strictly limited. There is no doubt that rents in most parts of northern India would have reached this level at the present day if it had not been for the tenancy legislation to which we shall refer later on.

CHAPTER XXXVII.

RENT (*Continued*).

IN the last chapter we sketched the growth of the market for agricultural land in northern India, and showed that in the conditions which prevail at present an excess of demand over supply must, in the absence of restrictive legislation, lead to the rise of rents up to the level where the cultivators can only make a bare living, and where the landholders can take all the wealth which the cultivators produce, except the amount that is required to keep them alive and at work. But at other times, and in other places, different conditions may prevail, and we will now examine the same question in a very different set of conditions. We will take an economic situation of the kind that was considered by the English economists who first worked out the theory of rent, and we will assume that the land is cultivated by intelligent men, who can get the capital and the labour they require on ordinary commercial terms, and who are ready to move from one part of the country to another, or even to give up cultivation and take to some other occupation, if it promises to pay them better. To simplify the case, we will assume that these cultivators do not themselves work with their hands, but devote their energies entirely to managing the business of their cultivation, and that they keep detailed accounts of the income

and expenditure of each field, so that they know at any time how much each field is earning for them. The land which we are considering varies greatly in fertility, but some of it is so poor that cultivators pay no rent for it, while for the rest they pay rent that varies according to its fertility. We have now to see how rents will be determined in the conditions which we have described.

It is usual to speak of land which is cultivated but bears no rent as being 'on the margin of cultivation', that is to say, its cultivation is only just worth while, and a very small change in the conditions will induce the cultivator to give it up. A cultivator in the position which we have assumed will continue to cultivate such land so long as its produce suffices to (1) replace the capital expended on it; (2) pay interest on the capital, and wages of the labour employed on it; and (3) leave for himself a sum which he considers reasonable remuneration for the work that he has done, that is his earnings of management. If the land does not produce enough to cover these items, he will cease to cultivate it. Thus, if the prices of the produce should fall, the land on the margin of cultivation would no longer be cultivated. This would mean that the supply of produce in the market will be decreased, and if the demand for produce is unchanged the decrease in the supply must lead to a rise in price, which will make it worth while to bring the marginal land again into cultivation. On the other hand, if the prices of produce should rise, the margin of cultivation would extend; that is to say, cultivators would find it worth while to take up still worse land, because the higher prices would just make its cultivation remunerative. In that case the increase in the supply of produce would tend to lower prices. Thus, in the con-

ditions which we have assumed to exist, the margin of cultivation does not consist permanently of land of a particular degree of productiveness ; cultivation will extend to poorer soils when prices rise, while the poorer soils will be left uncultivated when prices fall ; and whatever the prices may be, at any time there will be some land under cultivation which only just pays its expenses, and leaves nothing over which can be claimed as rent.

Of course the market-price for all produce of any particular kind is the same, no matter on what quality of land it is grown ; purchasers are not interested in the quality of the land, but only in the produce. Consequently all the land which is more productive than that on the margin of cultivation will yield a surplus after repaying the expenses of production, and the amount of the surplus will vary with its productiveness. This surplus will, in the conditions which we have assumed, be the rent payable to the landholder, because he is in a position to claim it, and none of the other people who take part in the production can do so. The labourer and the capitalist are already, as we have supposed, receiving the current rates of wages and interest, they cannot ask for further remuneration, or if they do the cultivator can refuse it, because he can get labour and capital at the current rates. The cultivator himself is also being remunerated for his work at the current rates, he would, of course, like to keep a part at least of the surplus for himself, but there are numerous cultivators competing for a limited quality of land, and his competitors will offer the whole surplus as rent, so he must do the same. If the quantity of productive land were unlimited, then the surplus would be divided between the landholder and the cultivator by the process of bargaining, but since the quantity of land is not sufficient to satisfy the

demand for it, the landholder is in a position to claim the whole of the surplus.

¶ This, then, is the classical theory of rent, stated in the simplest terms. Whatever the prices of produce may be, some of the land under cultivation will only just remunerate the labour, capital, and business management employed on it. This 'marginal' land will pay no rent, while all the more productive land will pay as rent the entire surplus of its production that is left after remunerating the labour, capital and management employed on it. It is convenient to describe this surplus as the Economic Rent, to distinguish it from the rents actually paid by particular cultivators.

On this theory the Normal Economic Rent will be determined by the normal prices of produce. If prices rise, it will pay to cultivate land which is less productive than that previously on the margin of cultivation, and this new and inferior land will then set the standard, and all land that yields more than it will pay rent. In other words, a rise of prices will cause cultivation to extend beyond its former margin, and rents will rise all round. If, on the other hand, prices fall, the marginal land will go out of cultivation, because its cultivation will no longer pay, the margin of cultivation will contract, and rents will show a general fall. Let us see what relation this Economic Rent bears to the rents that would be paid by Indian cultivators, if they were not restricted by legislation.

In the first place, there is no doubt that the 'margin of cultivation' can be recognised in Indian conditions, since in village after village we can find land which it only just pays to cultivate, and which does not, in fact, pay rent.¹

¹ This point may be insisted on, because it has been overlooked by some Indian writers on Economics. Much of the land which

Above this marginal land we find land of all grades of productiveness, and the rent varies generally with the productiveness of each field. The Indian cultivator, however, is in a very different position from the men on whom the classical theory is based. He does much of the labour and finds most of the capital besides doing the work of management, and he does not separate in his own mind the remuneration due to each of these factors of production. He does not ask, that is, if his land is giving him a fair return for his capital, fair wages for his labour, and fair earnings of management; he does not even ask if it is giving enough to replace the fixed capital that is being gradually used up. He cannot, therefore, calculate whether or not each separate field in his cultivation pays him, on the lines of the calculation assumed in the classical theory to be possible: he pays cash or grain for certain items of the cost of cultivation (the cost of the labour which he hires, the price of seed which he buys, and so on), and he calculates—or rather he learns by experience—whether the rest of the produce of his holding is sufficient to afford him a living and to pay the rent. Instead, therefore, of asking whether the land pays the expenses of cultivating it and leaves a surplus for rent, we must ask: Does it support the cultivator and leave a surplus?

If now we bear in mind the fact stated in the last chapter, that in most parts of northern India competition for land is keen, that cultivators have great difficulty in taking to some other occupation, and that their whole habit of mind is opposed to a change of this kind, we must conclude that, as cultivated by the landholders under the name of *Lhudkash* comes under this head, they cannot persuade any cultivator to pay them rent for it, but they cultivate it themselves because it just pays for the work done and the capital expended, though it provides no surplus that could be paid as rent.

in the absence of restrictive legislation, their rents are not likely to be less than the Economic Rent, and may very well exceed it by a considerable amount. Competition for land is so keen that people will be quick to offer higher rent for any land from which a cultivator is making an exceptional income, and they will offer at least as much rent as will bring down the income to what other land is yielding; that is to say, the landholder will be able to take *at least* the whole surplus as calculated in the classical theory. But cultivators will pay more than this rather than leave their land; they will reduce their expenses by working harder themselves and employing less hired labour; they will do without some of the comforts of life which they have hitherto enjoyed; and they will fail to provide for the replacement of the capital which is gradually being used up. They will offer then a rent which does not leave them sufficient return for their capital, their labour and their management, they may, in fact, keep for themselves only the barest necessities of life, and pay the rest of their produce to the landholder as rent. Of course the landholder is not bound to take the highest rent that cultivators would offer under the pressure of competition, and many Indian landholders do not, in fact, take so much. But landlords could take this amount if they wished to do so, and the ordinary man takes as much as he can get.

We see then that the theory of rent, which has been worked out by Western economists, applies, broadly speaking, to India. Where there is competition for a limited supply of land, the landholder can in any case take the whole Economic Rent if he chooses to do so, but the ignorance and the poverty of the cultivators may enable him to take even more than this. In the next chapter we shall explain why it is that government has introduced legislation to prevent

the landholder from taking so much, or, in other words, has decided that rents shall be determined otherwise than by the existing conditions of demand and supply for land. Before, however, we leave the theory of rent, a few words may be said on the relation that exists between the rent of land and the prices of agricultural produce. It is not unusual to find people arguing in conversation or in the newspapers that an increase in the level of rents leads to a rise in the price of food-grains, or, in other words, that prices depend on rents; speaking generally, this is exactly the reverse of the truth, and in fact rents depend on prices. This conclusion follows clearly from what has been said above, regarding the way in which the position of the margin of cultivation is determined by the prices obtainable for produce. The price just repays the cost of cultivating the 'marginal' land, and thus sets the standard by which the Economic Rent is determined; if prices rise, poorer land is taken into cultivation, and if they fall, the worst land is left uncultivated, so that in either case the standard by which rent is determined is changed, that is to say, rent depends on prices. This truth is commonly stated in the form of a law that 'Rent does not enter into the expenses of production'. The expenses of production, which at any time set the standard of price, consist of the cost of cultivating the 'marginal' land, which pays no rent; and their amount cannot depend on the amount of rent which is charged on the more productive land.

CHAPTER XXXVIII.

LIMITATION OF RENTS BY LEGISLATION.

WE have seen in the last chapter that the economic causes at work in northern India, if they were allowed to work without interference, would result in a very large share of the produce of the soil being paid to landholders as rent, while the cultivators would keep little or nothing beyond the barest necessities of life. We have also indicated that the working of these causes is interfered with by legislation, which limits the amount of rent that a landholder can claim, and aims at leaving to the cultivator part of the produce which would otherwise go to the landholder. This legislation is exceptional. the Indian government makes no attempt to fix prices, or wages,¹ or the rate of interest, but leaves them to be determined by the action of economic causes, and its exceptional interference in the case of rents requires justification. A full discussion of this question would extend far beyond the scope of the present work. The action of government is directed to secure many objects, the discussion of which forms part of the science of Politics, the economic prosperity of the

¹ Students will find later in their course that the governments of some countries are taking action to regulate the standard rates of wages in certain cases somewhat in the same way as the Indian government regulates rent; but this question has not yet arisen in India.

country is one of these objects, and a most important one, but it is not the only object; and a government may sometimes have to choose between promoting economic prosperity and securing some other aim. We must pass over, therefore, many of the arguments which justify tenancy-legislation, and confine ourselves to those which have a direct economic bearing. From this point of view the great argument in favour of such legislation is that the unrestricted rise in rents must operate in the long run to reduce the income of the whole community.

In order to understand this argument, we must pay some further attention to the idea of the Fertility of the soil, which we discussed briefly in Chapter VII. It would be a great mistake to regard the soil as a sort of "storehouse" from which food and other agricultural produce can be extracted; it is much nearer the truth to regard it in the same light as we regard a horse or a bullock. We know that in order to get from a horse or a bullock the best work of which it is capable we must feed and tend it carefully; we can get an extra amount of work from it *for a short time* by over-working it, but when it is treated in this way it very soon deteriorates, and can do less work than before. These statements are, broadly speaking, true of the soil. The fertility—that is the productiveness—of any ordinary field can be seriously injured in a very short time by improper methods of cultivation, which may secure a small gain in the present, but at the cost of a much greater loss in future income. On the other hand, careful and skilful cultivation may gradually produce a permanent improvement in the fertility of land. Thus the amount of produce obtained from the land, which forms much the greatest proportion of the income of the country, depends on the way in which the land is cultivated by the persons

who occupy it. If those persons are trying merely to get the largest possible immediate income, the production will tend in time to diminish ; while in order to secure that the production shall increase, it is necessary that each cultivator shall have a personal interest in maintaining and improving the productiveness of the land in his possession.

Now if there were no tenancy-legislation, a cultivator would have no such personal interest. Whatever happened he could only hope just to make a living. If he effected an improvement in the productiveness of his land, he would have to give up the whole of the extra produce as rent, while if the productiveness declined he would be able to get his rent reduced. And he could not be expected to work for an improvement in the future, because he would have no certainty that the land would remain in his possession, it might at any time be given to someone else who offered a higher rent than he was ready to pay. In these conditions then the wisest course for the cultivator would be to think only of the present, and get the largest crop he could without regard to the future productiveness of the soil. In order to induce him to regard the future, he must be given a reasonable prospect of keeping possession of the land long enough to secure the increased produce, and he must have the hope of keeping a share at least of the increased produce for himself.

This conclusion has been drawn, not merely from the theory of rent, but from the study of actual facts in countries where the economic position resembles that of India ; and in all such countries it is recognised that in order to maintain and increase the income which the country, as a whole, obtains from land the cultivators must be given a certain degree of *Fixity of Tenure*. *Fixity of Tenure* is the name given to the condition which has just

been indicated, when the cultivator has a reasonable prospect of retaining his land for a sufficient period to make it worth his while to manage it so as to improve its productiveness. And in the same way it has been recognised that the cultivator must not be made to pay more than a *Fair Rent*. This last expression is, of course, vague ; the most definite meaning that can be given to it is to regard a *Fair Rent* as a rent which leaves to the cultivator a sufficient share of any increase in produce he may secure to furnish him with an adequate motive for improving the condition of his land. Thus the object of Government is to secure for the cultivator, firstly, *Fixity of Tenure*, and, secondly, *Fair Rents*.

An examination of the various Rent Laws or Tenancy Laws in force in the different provinces of northern India will show that, while the particular provisions vary from province to province, these two elements, *Fixity of Tenure* and *Fair Rent*, are to be found in all of them : the protection given varies in completeness, and does not always extend to all cultivators, but in each case the object of the law is to give the bulk of the cultivators more or less *fixity of tenure*, and to limit the amount of rent which the landholder can claim from them. Thus in different provinces we find 'hereditary,' or 'occupancy,' or 'settled,' or 'statutory' cultivators ; some of these are entitled to hold their land for ever, provided they pay the rent and do not injure the land, while others are entitled to hold it for a minimum number of years. And we find different methods of limiting the amount of rent, in Oudh, for instance, the enhancement is limited to a fixed proportion (one anna in the rupee), while in Agra the occupancy cultivator can have his rent settled by a court of law. But the general principle is the same, landholders are

prevented from ejecting cultivators except on good grounds, and the amount of rent which they can claim is limited.

The study of Indian land-tenures is too large to be dealt with fully at this early stage of a student's course, but what has been said above is sufficient to indicate that landholders are not permitted to claim as rent the full share of the produce which they could claim in the absence of restrictive legislation. It is thus not easy to state in a few words the way in which the amount of rent is determined in India at the present day. Now that markets for agricultural land have come into existence, the conditions of supply and demand are such as to enable rents to be raised not merely to what we have spoken of as the Economic Rent, but to the point where the cultivator is left only the bare necessities of life. But government interferes to prevent this condition, and so far as its interference is effective, the result is to leave the cultivators something more than bare necessities in the present, and (what is more important) the hope that they can improve their income by improving the productiveness of their land. The cultivators then have an incentive to make the best use of their land in the interest of the country as a whole; and the discussions that arise from time to time as to the sufficiency of the tenancy law of a province are concerned fundamentally with the question whether or not this incentive is adequate.

CHAPTER XXXIX.

GENERAL WAGES.

IN the foregoing chapters we have indicated the extent to which markets for Capital and for Land have come into existence in India, and the nature of the processes by which rates of interest and of rent are determined in them. We have now to consider Labour from the same point of view. We shall begin with the case of general labour, and refer later to the special conditions which affect the remuneration of those occupations which require specialised skill.

If we ask a cultivator living in an ordinary village remote from a town how the wages he pays to labourers are settled, there is very little doubt that he would reply that it is entirely a matter of custom; that the field-labourers have always received two sers of grain (or whatever the local rate may be) for each day on which they worked, and that the carpenter and other artisans and servants also get the remuneration that is customary. His answer would have been perfectly true not very long ago, and is nearly true even now, because away from towns the rates of wages are in fact largely customary, and the customs regarding their amount do not change rapidly. But as students of the subject we must go rather further, because we know that customs are not everlasting, and that

they do, in fact, change ; we want to look back to the time before the custom was established, and so to find out what were the causes of the rates which have become customary. ' Looking back ' means studying the economic history of the past. This stage in the economic history of India is still very imperfectly known, but there is good reason to think that the system of paying wages to labourers must have arisen from a condition of slavery. It is probable that the ancestors of the men of low castes, who now form the bulk of the village labourers, were at one time in the position of slaves of the cultivators, that is to say, they were not free to leave the village or to offer their work to the employer who would pay the highest wages, but they were bound to do their master's work, and the share of the produce which they received was determined by their master's will. In these conditions there would obviously be no ' market ' for labour.¹ The chief economic consideration that would affect the cultivator would be the need of keeping his slaves alive and at work, it would upset his business, and possibly ruin him, if the slaves either died or got desperate and ran away into the jungles at a time when his land was urgently in need of their work. To avoid such risks, he would have to give them enough grain and other produce to keep them at work ; the least he must give would be what we have described as the necessities for existence, since if he gave less than this they would starve ; and he would probably, in practice, give a little more than this so as to keep them contented. At this period the slaves would have very few wants

¹ A market for labour may exist where slavery prevails if the slaves are bought and sold like cattle, but there is no reason to suppose that in India the village-labourers were bought and sold, and transferred from place to place, as a regular practice.

beyond a sufficiency of food, and while each village had little communication with its neighbours, there would be little chance of many new wants arising. When, therefore, the cultivators had once learned by experience how much produce must be given to keep their slaves alive and content, things might continue without change for very many years; on the one hand, the same payments would be made year after year, and they would become a matter of custom, on the other hand, the slaves would go on satisfying the same wants in the same way, and their lives would also be regulated almost entirely by custom. The customs would continue in force until changes from outside began to affect the life of the village; their origin would be forgotten, and the people—whether cultivators or labourers—would simply say that things had always been so.

As we have said above, the economic history of India is not sufficiently known to justify a definite general statement that the labourers were really slaves, and that wages began in this way. This is, however, the most probable conclusion from what is known; and perhaps the strongest evidence of it is to be found in the fact that even now the condition of the labourers in the more backward tracts of the country is very like that of slaves. They cannot, of course, now be forced by law to work for their masters, but as a matter of fact many of them do not think of doing anything else, but take the customary wages, and live in the customary way, they are only gradually coming to realise that they are free to go and work for whoever will pay them best.

It is probable then that in most villages the customary rates of general wages were based originally on the amount of commodities required to keep slaves alive and reasonably

content in the way of life to which they were accustomed. There was then no labour-market in the villages, and even now there are many villages where the influence of the market is very little felt ; in the case of labour, as in that of capital, we have to look to the cities and towns for the development of the market. A town is essentially a collection of a large number of people engaged mainly in producing wealth, and labourers are needed to take part in the production. If now we consider the case of a town coming into existence in what was previously an ordinary village, we see that, as production develops, the producers will want more labourers, and they must at first look to the neighbouring villages for their supply. But the labourers in the villages are accustomed to their old life, and some inducement must be offered to them to change it ; the obvious inducement is to offer somewhat higher wages than those that are customary in the villages. Thus the growth of a town implies the beginnings of a market for Labour. There are now different employers, some in the town and some in the villages, anxious to induce men to work for them, and offering wages as an inducement, the amount of wages is no longer fixed entirely by custom, but it is beginning to depend on the conditions of supply and demand. The demand consists of the employers, who want men to work ; and the supply consists of the labourers in the neighbourhood.

At first such markets would be very small and local, but the gradual development on the one hand of means of communication, and on the other hand of knowledge and intelligence among the labouring classes, would in time produce the larger though still imperfect market for labour which exists to-day, and the main features of which have been outlined in Chapter IX. This market is, as we have

seen, still very imperfect. In a thoroughly-organised market, we should find the labourers all over India constantly informed of the demand for work and of the wages offered in all parts of the country, and ready to start off for any distant place where there might be a prospect of earning higher wages, as a matter of fact, only a small proportion of the labourers think of moving at all, and most of that small proportion think of going only to some particular place where they happen to know the conditions. We must not, therefore, expect to find that the rate of wages is determined so closely by the general conditions of supply and demand as it would be in a thoroughly organised market. We find rather that the markets for labour resemble the markets for agricultural land. In both cases there are large numbers of local markets, within which the conditions of supply and demand have a large influence in determining the rate, and these markets are more or less connected with each other, so that each of them is influenced to some extent by the conditions prevailing in its neighbourhood, but the connection between the markets is by no means so close as that which we found to exist in the markets for a commodity such as wheat. The essential difference between Labour and a commodity such as wheat will be apparent when we say that Labour may be regarded as a commodity with a will of its own. A sack of wheat has no choice in its disposal, but is sent for consumption wherever its owner decides; but a unit of Labour is embodied in a living man, who cannot be sent about the country in the same way, but who decides for himself where he will go and what work he will do. The market for Labour is thus affected very largely by the tastes and views of the labourer, and in discussing the question of wages it is always necessary to

remember that we are no longer dealing with inanimate things, but with human beings whose nature is like our own. We shall return to this essential difference in the following chapters.

CHAPTER XL

GENERAL WAGES (*Continued*)

WE have now to consider the working of the markets for labour, which, as we have seen in the last chapter, have gradually come into existence in India; we have to examine the nature of the demand for labour, and also of the supply, and to see in what way equilibrium is secured. In the first place, however, it is necessary to settle the meaning which we attach to the phrase *Rate of Wages*.

We know that in an ordinary Indian town there is at any time a prevailing rate of wages for general labour; that is to say, if we engage an ordinary coolie for ordinary work, we expect to pay him the prevailing rate of two annas, or three annas, or whatever it may be at the time. In the same way there are prevailing rates in villages, which may differ considerably from village to village: an ordinary labourer expects to receive for his day's work a fixed amount of money, or of grain, according to the rate that is established in that particular village in which he works. The existence of a prevailing rate does not mean that every labourer is paid precisely at that rate. We expect to pay a man more than the prevailing rate if he does an exceptional amount of work, or does it exceptionally well, or works for longer hours than usual; and, on the other hand, a man who is too weak to do a full day's

work, or who works badly and carelessly, finds that he cannot get employed at the usual rate, and has to work for lower wages. But these cases are exceptional. In any town or village there is a standard of work and efficiency recognised by the people, and the prevailing rate of wages is paid to those labourers (the great majority) who work in accordance with that standard.

At an earlier period in the history of India, it is probable that the remuneration of labourers was given in the form of commodities which would satisfy their wants directly, and would not need to be exchanged for other commodities; the labourers received the food and clothing and fuel which they required, and were sheltered at their employer's expense. This system has changed gradually: first, labourers were paid mainly in grain, and though they consumed most of this as food, they had to exchange part of it for clothing or other commodities, and then they were paid mainly in money, with which they could buy the food and other commodities that they need. But traces of the old system survive, and make it necessary that, when we are considering the remuneration of a particular class of labourers, we should be careful to count up all that they really receive, and not limit our attention to the money that is paid. Thus, field-labourers in some parts of the country commonly receive some dried pulse (*chabéna*) or some tobacco every day in addition to the ordinary rate of grain or cash wages, and these items must not be overlooked in calculating the remuneration which they receive. Again, as we saw in Chapter XXXII, the money paid to a groom in some parts of India is only a part of the remuneration which he receives; he still receives a quantity of commodities for consumption in addition to his pay. Such customs make it in some cases

difficult to state the total remuneration received by labourers of particular classes

As soon as wages begin to be paid in money, a distinction arises between money wages and real wages, which must be carefully borne in mind. The expression money wages means simply the remuneration of the labourer stated in terms of money; by real wages we mean the quantity of commodities for consumption that the remuneration provides. The labourer works in order to obtain commodities for consumption, and the important question for him is the quantity of these commodities which he can get, and not the number of coins which come into his possession. If we find that the rate of wages in a particular town has risen from two annas to three annas a day, it is obvious that the rise in money wages has been at the rate of fifty per cent, but if we want to find out what the rise in real wages has been, we must consider the prices of the various commodities which the labourers consume, and see what quantities of these they can purchase. If prices have not changed materially during the period which we are considering, then the rise in real wages will be about the same as that of money wages, the labourer can buy half as much again when he has three annas to spend as when he had only two. If, on the other hand, prices of the commodities which he consumes have risen by fifty per cent, he is no better off than before; he has more money to spend, but it will purchase only the same quantity of commodities, and thus the amount of his real wages has not changed. Again, if we find that the rate of wages in a village has remained for a long time at two annas a day, we must not conclude that the rate of real wages has not altered in that time; we may find that the labourer has to pay more than before for grain and salt and clothes

and other commodities, so that his real wages have fallen while his money wages are unchanged.

It is by no means easy to find out accurately the changes that have taken place in real wages. A detailed study of the labourer's consumption has to be made so that we may know what commodities to take into account, and in what quantities; and though this is not difficult in the case of a remote village where the labourer has few wants and his habits change slowly, the difficulty becomes serious as the number of wants increase, and as the means of satisfying them multiply. The difficulty has to be faced when we wish to study the economic progress of the people, because their condition depends on the amount of real wages, and not on money wages, but for the present we will put it aside by assuming that the prices of commodities do not alter materially, and that a rise or fall in money wages means a corresponding increase or decrease in the quantity of commodities that a labourer can obtain. We can then speak of a rise or fall in the rate of wages, and for convenience we can speak of the change in terms of money; but we must remember throughout that the important thing to the labourer is not the amount of money he receives, but the quantity of commodities which he can obtain.

We will now look at the working of a market for Labour, such as exists in an ordinary town in northern India, and see how the prevailing rate of wages is determined. The Demand for labour comes from all the employers in the town who want coolies to work for them; there are probably several classes of employers—one or two factories, the goods-station of the railway, merchants who have goods to transport, contractors who are erecting buildings or repairing roads, residents who want coolies to pull punkahs, or cut grass, or work in their gardens, and the like, and

the demands of all these classes taken together make up the total demand in the market. This demand is not a fixed quantity, but varies with the rate of wages very much in the same way as the demand for a commodity varies with the price, that is, the general Law of Demand applies to labour as well as to commodities. This idea will probably be unfamiliar to students who have no practical experience of employing labourers, and we must examine it in a little detail.

When we considered the demand for a commodity, we found that for each consumer there is an upper limit of price, and that when the price reaches this limit he ceases to consume that commodity. In the case of labour, this upper limit is determined by the amount of wealth which the labour produces. This is easy to see in simple cases. a man will not pay a coolie two annas to cut grass if the grass is not worth two annas to him. he will pay less than the grass is worth to him if he can get the coolie to work for less, but he will not pay more. The same fact is true, though it is not so easily seen, in cases of organised production. where coolies are working with capital provided by the producer, it is not easy at first sight to say how much of the wealth produced is due to the coolies' work, and how much to the capital, but it is a most important part of the producer's business to ascertain this, and to make sure that every coolie whom he employs is at least worth his wages. No employer then will pay more for a coolie than he thinks the coolie is worth. Thus there is an upper limit to the Demand Schedule for labour.

There is also a lower limit, because the demand of each employer can be completely satisfied. Even if coolies were willing to work for as little as one pice daily, the number that could find employment in the town would not be

unlimited, though it would be largely increased, and there is thus a lower limit to the Demand Schedule, corresponding to the point in the case of a commodity where everyone can satisfy his want completely. Between these two limits the number of coolies demanded varies with the prevailing rate of wages, increasing when the rate falls and decreasing when it rises, precisely in the same way as the demand for a commodity varies with the price. Even in ordinary household affairs, a man has to consider the rate of wages when deciding how many coolies he can employ to cut grass or work in his garden, and if he finds that the rate has risen he has sometimes to reduce the number employed, and leave undone work that would have been done if wages were lower. In the same way cultivators have constantly to consider whether or not to hire a few labourers for a day or two, and a difference of even a couple of pice in the rate of wages may decide whether the labourers shall be employed or not. Contractors, again, who employ large numbers of coolies, have to pay the closest attention to the rate of wages if the rate falls they employ more coolies, and get their work done quickly, while if it rises they reduce the number of coolies, and spread the work over a longer period. Where production is organised on a large scale, and much capital is employed, the rate of wages is not less important. Some of the most difficult problems that a producer has to decide arise from the possibility of substituting machinery for manual labour; he has to compare the interest and depreciation that must be charged on the machines with the wages that would have to be paid if the work were done by hand. Where wages are low, he will employ large numbers of coolies in such work as moving materials and finished goods from place to place by hand; when wages

rise, he may find it advisable to set up new machinery, and thereby reduce the number of coolies.

All classes of employers then are inclined to reduce the number of coolies when the rate of wages rises, and in a town of any size it is reasonably certain that, whatever the rate of wages may be, there are some employers who are in doubt as to the exact number of coolies they can profitably employ. Even a very small change in the rate will cause these hesitating employers to decide in one way or the other, a slight rise will reduce the demand, and a slight fall will increase it. The demand for labour in the market of an ordinary town can thus be represented by a schedule similar to the Demand Schedule for a commodity, and following the general Law of Demand, that a rise in wages will reduce the demand and a fall in wages will increase it.

Before leaving the consideration of the Demand for labour, attention should be directed to the fact, which is of very great practical importance, that the upper limit of the Demand Schedule depends on the Efficiency of the labourers in the market. The nature of efficiency has been discussed in Chapter X, where we have seen that the amount of wealth produced by labour varies greatly in accordance with the quality of the labour employed; the upper limit of wages depends on the value of the work done, and, consequently, on the efficiency of the labourers employed. This fact is well known to employers. Contractors, for instance, know that they can pay higher wages for earth-work to labourers from Oudh than to labourers from Central India, because the former do more, and better, work than the latter; and where large buildings are under construction it is sometimes worth while to bring Sikh carpenters from the Punjab, or Chinese carpenters from

Calcutta; the Sikhs and Chinese get much higher wages than ordinary Indian carpenters, but they are worth their wages, because they are more efficient and do better work. Labourers can never go on earning more than their work is worth to employers, but an increase of efficiency, which increases the worth of their work, can also lead to a rise in the rate of wages.

CHAPTER XLI

GENERAL WAGES (*Continued*).

WHEN we turn to consider the Supply of labour in the market, we have a more complex problem before us than that of the supply of a commodity. The supply of labour on a particular day consists of the labourers who are present, and able and willing to work. Their object in working is, as we have seen, to obtain commodities for consumption, an increase in wages means (on the assumption which we have made that prices do not change materially) an offer of a larger quantity of commodities, and this tends to increase the supply of labour by inducing people to work who are hesitating whether the remuneration offered is sufficient. So far then the position is similar to that of a commodity, where a rise in price results in an increase of the supply offered for sale; but the working of this tendency is complicated in various ways owing to the facts, on which we have already laid stress, that the labourer has a will of his own, and that his life is largely a matter of custom and habit.

In the first place, we must remember that the labourer cannot be separated from his work. The destination of a commodity such as a sack of wheat makes no difference to the seller, who is satisfied when he has parted with it and received its price, it makes a very great difference to

the labourer where he has to go, and under what conditions he has to do his work, and the offer of higher wages may be insufficient inducement for men whose habits of life are not easily changed. Thus it is a matter of common knowledge that wages may be considerably higher in an Indian town than in villages a few miles distant; this difference could not continue to exist if labour were just like a commodity, because the labourers would leave the villages, reducing the supply there, and go to increase the supply in the town. Some labourers do, in fact, go to the towns, but by no means so many as the employers in the towns would like; the reason is that the conditions under which they have to live and work in a town are less attractive to them than those which prevail in the villages. A village-labourer usually has a house of his own with some open ground near it, where he and his family can live in the way to which they are accustomed; if he goes to a town, he has to rent a house or a room in a crowded lane, with probably no place where he can sleep in comfort on hot nights, and with many other discomforts, and his whole way of life has to be changed. Then the conditions of his work in a factory are unpleasant, he cannot always rest when he is tired, or stop work to smoke or drink water, as he usually could in his village: and he may have to work under harsh overseers, and alongside of strangers of other castes, instead of passing his time in the society of his friends and relatives. Considerations of this sort affect very strongly the view of the village-labourers in northern India, and a large proportion of them prefer two annas a day in their village to three, or even four, annas in the city.

This point—the effect on the supply of labour of the attractions and drawbacks of particular forms of employment—is by no means peculiar to India, but has been

noticed by writers on Economics in most countries. The views of different races may differ considerably as to what constitutes an attraction, and as to the seriousness of particular drawbacks. Thus, while Indian employers complain that even higher wages will not draw labourers to the cities, in some countries the complaint is that all the best men go to the towns, and that the towns are overcrowded, while there are not enough labourers to do the work of the country: but the fact remains that to the men of any particular race some forms of employment are more attractive than others, and they will work for lower wages at those which they prefer in other ways. The supply of labour in a particular market, or for work of a particular kind, is thus not merely a question of the wages that can be earned. The labourer thinks of the amount of wages, but he also thinks of all the other advantages and drawbacks incidental to the employment, and he chooses that which, taking everything into consideration, he considers the best. Economists speak of Net Advantages when they are comparing one form of employment with another. The idea underlying this expression is that a labourer can reckon up on one side all the advantages (including the wages) of a particular kind of work, and on the other side all its drawbacks, and then deduct the drawbacks from the advantages, when he has done this, he can compare the net advantages of one form of employment with another, and he will choose that form of which the net advantages are the greatest. Such a calculation cannot be made exactly, because it is not possible to compare directly with each other such things as differences in climate, the conditions of work, the social life, and so on; but the idea makes it easy for us to see what the labourer more or less unconsciously tries to do. He wants

to choose the pleasantest life for himself and his family, and he compares the conditions of different ways of living as well as he can. A difference in the amount of wages will influence his decision, and he may choose a form of employment with many drawbacks because he thinks the extra wages obtainable in it will more than counterbalance these; but what he looks at is the conditions of the employment as a whole, and not merely the wages obtainable.

A second cause that may affect the Supply is the impossibility of storing labour. A merchant can in nearly all cases store his stock of commodities if he thinks the prices are too low; they will be as fit for consumption some months hence as they are to-day. But if a labourer does no work on any day, that day is lost, he cannot offer two days' work on the next day. In selling his labour he is thus in the position of a merchant whose stock of goods must be sold on the day that it is offered, or it becomes worthless—as worthless as a stock of fish that has lain on a market-stall during a night in May. It may be worth the while of a body of labourers to refuse to work for wages which they think are too low, in the hope that employers will offer more; action of this kind, which is called 'striking,' is very common in many countries, and is by no means unknown in some industries in India; but in order to strike effectively, labourers must have the means to feed themselves and their families during the period of idleness, and where labourers have no resources, but spend their wages as they earn them day by day, refusal to work means starvation. The ordinary labourer then is rarely in a position to withhold the offer of his labour for more than a day or two, while many employers can, as a rule, wait longer than that, and consequently the labourer's position in bargaining for wages is weaker than that of the employer, and labourers

have often to work for less wages than they could get if they were in a position to withdraw their labour from the market, that is, to reduce the Supply, for a period long enough to induce employers to offer higher wages. Students will find later on that in western countries this question has become of great practical importance, and they will have to devote much attention to the way in which workmen combine to form what are called Trade Unions, one of the main objects of which is to enable workmen to bargain with employers on more nearly equal terms, by providing them with the means of living during a strike; and there is little doubt that the question will become important throughout India also if the system of factory-production extends as it appears likely to do. But for the present the ordinary labourer has neither the intelligence to know when it would be wise to withhold his labour, nor the resources required to enable him to do so; and, consequently, he has often to work for less than the wages which the state of the market would otherwise enable him to claim.

Next, we must consider the effect on the supply of labour of what we have called efficiency. One maund of wheat is just as useful a commodity as any other maund of the same kind; it will give the same number of satisfying meals. But one labourer is not just as useful as any other labourer; his usefulness to his employer depends on the amount and quality of the work which he performs. An increase in efficiency, such that three men can do the work that previously required four men, would produce the same effect on the supply of labour as an increase of one-third in the number of labourers. This consideration is important when we are considering changes in the supply of labour during a long period of time, but it does not affect

the equilibrium in the market in a short period, because sudden changes in efficiency do not occur ; a large change can result only from careful training and the development of the moral qualities, and these processes come about slowly and not suddenly.

Another important consideration is the length of time required to increase the supply of labour through the growth of population. When the market-price of a commodity rises, producers set to work to increase the supply, the time required for this process varies greatly, from the few days or weeks that a factory requires to produce increased supplies of commodities like yarn, to the period of some months required to sow and reap a larger area of wheat ; but in any case it is much shorter than the period required for children to be born and grow to the age at which they can work as labourers. Thus the supply of labour cannot be affected *rapidly* by the growth of population. On the other hand, it may be affected in a very short period by the decrease of population resulting from plague or some other epidemic. As a rule, however, rapid changes in the number of labourers in a market result from migration rather than from changes in the birth-rate or death-rate. The subject of migration has been discussed in Chapter IX., and we have seen that the process is becoming more and more important in India, though the obstacles are still very great ; there are, however, grounds for concluding that as time goes on the adjustment of the supply of labour will be affected more and more rapidly by means of migration, though the adjustment is never likely to be so rapid as is seen in the case of a commodity.

We have not yet given a complete account of the special features that exist in regard to the supply of labour, and

the subject will require the attention of students at a later stage; but enough has perhaps been said to make it plain that the working of the labour-market is by no means so rapid as that of the markets for commodities. The demand for labour decreases as the rate of wages rises, and there is a tendency for the supply to increase in the same circumstances, so that the tendency to produce equilibrium exists—that is to say, the market-rate of wages tends to settle at the rate where the supply is equal to the demand, but the supply is, as we have seen, affected by various other causes, and so does not vary directly with the wages offered, and, consequently, the adjustment is imperfect. The result is that in an ordinary Indian market the rate, when once settled, is slow to change—employers get accustomed to paying a certain sum, and labourers get accustomed to work for that sum, and the rate is not affected at once by small changes in the demand or in the supply, so much so that a slight knowledge of the market in times when such changes are not large may lead to the hasty conclusion that demand and supply do not affect the rates at all.

This conclusion would, however, be wrong, as is seen when the changes are large. We know, as a matter of fact, that a widespread epidemic of fever will raise wages for the time being, because the supply of labourers able to work is largely reduced; the men are still present within the limits of the market, but they are not able to work, so their work is not on offer in the market. A severe outbreak of cholera or plague may equally reduce the supply of labour, because many labourers run away; but the demand usually falls at the same time because many employers run away too, and, consequently, the effect on the rate of wages cannot be foretold with the same degree

of certainty. The effect of a very bad harvest is usually to lower wages in towns, because employers who depend largely on the harvests for their incomes have little money to spend, and the high prices of food leave them less than usual to spend in other ways ; and while the demand for labour falls, the supply rises because labourers who cannot find work in the villages come to look for work in the town. A large public work again, such as the making of a railway or canal, always tends to raise wages in the neighbourhood, because it requires a very large number of coolies, or, in other words, increases the demand for labour. These examples are sufficient to show that, as a matter of fact, the market rate of wages is affected in the same way as the market price of commodities by changes in supply and demand, provided that these changes are of considerable amount relatively to the size of the market.

We find too that when temporary fluctuations occur, causes come into operation to bring wages back to the standard of the place and time, just as market-prices of commodities tend to return to the normal level. When wages rise, the demand for labour falls off and the supply tends to increase, while when wages fall the demand rises, and the supply is reduced, so that in either case the rate tends to return to the normal after each fluctuation. In the case of commodities, we found that the normal price at any time depends on what we call the Expenses of Production, because producers will not go on producing for less than this amount, while if they receive more the amount produced will be increased until the price falls. Similarly, in the case of labour, the normal rate of wages at any time is the amount that will maintain the labourer and his family in the way of life to which he is accustomed. If wages fall largely below this point for any length of time, then the

supply of labour may be reduced by labourers deciding not to work, and perhaps leaving the market and going to work elsewhere, while if wages remain much above this point, labourers who were hesitating will decide to work, and perhaps men will come to the market from elsewhere, and so the supply will be increased. Changes such as these will not, however, take place rapidly in the conditions which exist in India, and it is always possible that, instead of such an adjustment, the labourers may change their customary way of life, that is that the normal rate of wages may change.

The way of life to which labourers of any grade are accustomed is usually spoken of as their Standard of Comfort. It is easy to recognise the Standard of Comfort prevailing at any time and place, and also to see that it varies from time to time and from place to place. We know by experience that most of the labourers in a particular town, or in the villages of a district, live in houses of the same kind, that they wear the same sort of clothes, and that they eat about the same amount of food of the same kind. But if we compare the labourers of Benares with those of Delhi, or the labourers in a Bihar district with those of a district in the Panjab, we see at once that the latter have a distinctly higher standard of comfort, they eat a larger quantity of more nourishing food, they wear better clothes, and they have usually more money to spend on small luxuries or amusements. This Standard of Comfort, then, is a thing that really exists, and that we can recognise. If bad times come, when there is little work to be had and labourers are not able to earn as much as usual, they cannot, of course, maintain their standard of comfort; they must eat less, and have to put up with inferior food, and they must wear less clothing, and make

their old clothes last longer , but when the conditions of employment improve, they return as soon as possible to their former way of living.

But, as we have indicated above, the Standard of Comfort may change, just as changes must be expected in the expenses of production of a commodity. The habits and customs of the people change slowly, but they do change, and the rate at which they change in India is increasing. A rise in wages may last long enough for the labourers to get accustomed to a better way of living, for instance, to consuming wheat instead of the coarser grains , and when their Standard of Comfort has thus been altered they are not likely to give up wheat as long as they can get it. On the other hand, a fall in wages may last long enough for the labourers to get accustomed to a reduced amount of food, and then their Standard of Comfort will have been altered for the worse. In the next chapter we shall consider further this question of changes in the Standard of Comfort and in the normal rate of wages.

CHAPTER XLII

GENERAL WAGES (*Continued*).

WE must now consider the subject of changes in the normal rate of wages. The normal rate in a market is determined at any time, as we have seen, by the conditions of supply and demand in such a way that the labourers as a whole can just maintain their existing standard of comfort, but this standard of comfort is itself liable to change, and in India changes are likely to occur more rapidly in the future than has hitherto been the case. We have seen in Chapter XXXIX that the rates of wages in villages remote from towns might remain unchanged for a long time, because the customs of the people, which make up the standard of comfort, might then be very slow to change, what we have described in that chapter as the customary rate—the amount required to keep the labourers alive and content—is in fact the normal rate in those conditions, and just enables the standard of comfort to be maintained. But our study of Consumption has shown us that the customs of Indian life are changing more rapidly than was formerly the case, and these changes must affect the normal rate of wages. A more complete study of the conditions of normal equilibrium in a market is required before anything like a complete account of the theory of changes in normal wages can be given; but the practical importance of the

subject is so great that we must attempt to indicate by examples the nature of the changes that may occur, and their ultimate effect on the economic condition of the country.

In most parts of northern India at the present time, we see that the ordinary labourers have what we must admit to be a very low standard of comfort. they get enough food for existence, but they would be more efficient labourers if they could get more nourishing food, while their supply of clothing, and their house-accommodation are generally insufficient for the proper maintenance of health. They can spend little or nothing on training their children for work, and they cannot, as a rule, save up money to support themselves in sickness or when they are too old to labour. Their wages are low, and their efficiency as workmen is also low. What will be the result on such labourers of a considerable rise in the wages which they earn ?

Writers who base their conclusions on the facts observed in Europe and America say that the answer to this question depends on the way in which the extra wages are spent, and they distinguish expenditure that leads to increased efficiency of labour from that which tends to reduce it. Living in India, we have to consider another case which has not hitherto presented itself so clearly in the West, because we find that higher wages may mean less time spent in work. We will take these cases one by one.

In the first place we may suppose that when wages rise, the labourers live and work as before, and spend their increased earnings on some vice such as the consumption of intoxicating drugs. Continued indulgence in these will, as is well known, seriously reduce the efficiency of the labourers; they will become physically weaker, and,

what is more important, the moral qualities which (as we have seen in Chapter X) affect efficiency so largely will be gradually destroyed. The rise in wages will then be lost. Employers will find that the work of the deteriorated labourers is worth less to them than formerly, and will offer less for it. But it is most unlikely that men who have formed the habit of using such drugs will give them up when their income is reduced, they are much more likely to go on using drugs and reduce their expenditure in other ways. This means that their standard of comfort, which is also the standard of their wages, will fall; this means further loss of efficiency, and this in turn means a further loss of wages, and so things will go from bad to worse. But this is not all. As the standard of comfort falls, the labourers' children will suffer more and more from insufficient food and clothing, when the time comes for them to work, they will be weaker, and therefore less efficient, than their fathers were at the same age; and if (as is very likely) they learn from their fathers the habit of using drugs, the progressive deterioration will go on throughout the second generation, and the final result will be a degraded and inefficient population, earning barely enough to keep themselves alive. So far we have assumed that the population will not change materially in numbers. If it increases, the progressive fall in wages will go on more rapidly, because there will be a larger number of inefficient labourers looking for work. If it decreases, the fall in wages will be retarded because there will be fewer of them; but wages must continue to fall so long as efficiency continues to decrease.

This is an extreme illustration: we have chosen it so as to show as clearly as possible the result of a loss of efficiency among labourers. The cause of the loss of

efficiency is for our present purpose immaterial ; the point is that when efficiency is reduced by any cause, the reduction is likely to be progressive : loss of efficiency means loss of wages, and loss of wages means further loss of efficiency, and the process of deterioration can be stopped only by a change in the habits (whatever they may be) that cause the inefficiency.

Now let us contrast with this the case of a labourer who spends his increased earnings in such a way as to increase his efficiency. At first the extra money will go to improve the food and clothing of the labourer and his family ; and better food and clothing will make him a more efficient labourer, and enable him to secure a further increase in his income. Then he will be able to live in a better house, to spend something on training his children, and perhaps save up some money to support him in old age. We may safely believe that as his wages rise, he will—so long as he spends them wisely—become a better man in every way. The children of such a man will start life with much greater advantages than their father enjoyed ; better fed and better clothed, they will be stronger and healthier, and they will be trained for work of a higher class than their father was, while the moral qualities that make for efficiency will have had the best chance of developing in a home governed by a man of this type. In this case we have exactly the opposite result to that which we have just considered : the improvement in position is likely to be progressive, because each increase in earnings is so spent as to secure greater efficiency, and each increase in efficiency is likely to secure a further rise in wages.

In this case too we must allow for possible changes in the numbers of the population. If the numbers fall, the process of improvement will be accelerated, because there

will be fewer labourers looking for work, while if the numbers rise it will be retarded. But we must remember that if (as we suppose) the labourers generally are improving their position and increasing both in thrift and in productive power, the children of some of them are likely to rise to the higher grades of labour, and will no longer compete for the employment which we have described as general labour. And we must also allow for the fact that labourers of this type are not likely to bring up a larger number of children than they can hope to provide with a favourable start in life, the population will in this case be limited by the prudence of its adult members, and the conditions to which Malthus looked forward (*vide* Chapter VIII.) will be to some extent realised in practice. In the case then which we are considering, the increase in the number of labourers is not likely to be so great as to prevent the progressive improvement resulting from a progressive increase in efficiency.

Looking, then, at the labouring classes of northern India as we see them to-day, we might say that a rise in their wages, if it lasts long enough to give time for a change in their habits, may have one of two results. If the increased income is so spent as to secure greater efficiency on the part of the labourers, then a progressive improvement is likely to follow in their position, and there is no reason why, in the course of a few generations, the bulk of them should not enjoy all the requirements of a reasonable life. If the increased income is wasted, and its expenditure leads to a loss of efficiency, then a progressive deterioration must be expected until the labourers are living on the barest necessities of life. But we have still to take account of a third possibility.

In the previous Book we had to recognise the possibility

that, in the artisan-stage of production, the supply of a commodity would decrease as its price rose, because the artisans would do less work. In the same way it is possible that the supply of labour will fall off as wages rise ; This possibility has not usually received serious consideration in most countries, but it has to be reckoned with in India : it is a common complaint of employers that when they pay higher wages their men work on fewer days in the week, and there is undoubtedly a certain amount of truth in the complaint. Habits and customs, as we have seen, change slowly in India ; and it may well be the case that labourers will not increase their expenditure, but will be content to go on earning the same income as before ; and if they can earn it by four days' work instead of six, they will only work for four days and spend the other days in idleness. Let us suppose that labourers generally adopt this attitude, and let us also suppose that their total number does not vary greatly, and that their efficiency is not affected by the fact that they spend a much larger portion of their time in idleness.¹ The immediate result is that the supply of labour is reduced by one-third of its whole amount ; and if it were not for the facts which are embodied in the Law of Demand, wages might rise to an infinitely greater figure, because each rise in wages would reduce the supply, and each reduction in the supply would result in a further rise in wages. But, as we know, employers will not pay more than the labour is worth to them ; if they find that raising wages diminishes the supply of

¹ Their efficiency might be reduced if the habit of working steadily while at work should be weakened by the change ; they would then do less work than before even on their working days. It might on the other hand be increased if (which is not likely) working every day puts an excessive strain on their muscles or on their nervous system, for then they would do better work after each day of rest.

labour, they will not go on raising wages, but they will organise their production so as to employ as little labour as possible, and they will refrain from extending their production or from undertaking new industries because of the difficulty of getting sufficient labour at wages which they can afford to pay. Thus the final result may be that the condition of the labourers is unchanged, they maintain their standard of comfort, and neither advance nor deteriorate. But the production of wealth in the country may be seriously affected by the inadequacy of the supply of labour, so that the choice of leisure (or idleness) on the part of the labourers will prevent not only their own progress but the economic progress of the country as a whole.

We have now indicated three ways in which the position of the labouring classes may be affected by a rise in the rate of wages. Human nature being what it is, it is not likely that all the labourers of any country will behave in the same way. Some will become more efficient, some will become less efficient, and some will not change; so that the three tendencies will be all at work at the same time. There will always be some labourers increasing in efficiency and bringing up their children to be better labourers than themselves, there will be others decreasing in efficiency and bringing up children who will be worse workers than their fathers, and there will be others again whose efficiency does not change and whose children will be neither better nor worse. And the same individuals will not always remain in the same class. Men who have failed to make a living as cultivators or as artisans will become ordinary labourers, while ordinary labourers may become cultivators, or acquire sufficient skill to rise to a higher grade of employment. The final result for the

country will depend, in the long run, on the balance of these various forces : the position of the labouring classes will gradually improve if their efficiency on the whole increases, and it will deteriorate if their efficiency on the whole declines. In no case can they continue for long to get more wages than their work is worth, and the amount of their wages must depend very largely on their efficiency, that is, on the quantity and the quality of the work they do.

In a first approach to the study of Economics it is possible only to take a very general view of the action of the various causes that are at work, and students will find that this question of the causes affecting the rate of wages is even more complicated than the foregoing account would suggest. But before leaving the subject a few words must still be said regarding the influence that is exerted by the character of the labourers' wives. In most households the wife takes a very large part in regulating the way in which the income is spent, and it rests very largely with her to determine whether the expenditure makes for increased efficiency or the reverse. And her influence over the children is probably of even greater importance in the long run, because their moral character depends on their mother's training more than on any other single cause. The future of the working classes depends therefore very largely on the character of their wives and mothers ; and if for a moment we look beyond the limits of our science, and consider what steps can be taken to give the working classes the best chance of improving their position, we must recognise that the result must be sought by influencing not so much the adult labourers themselves as the women who have so large a share in controlling the expenditure of their wages, and in training the next generation of workers.

CHAPTER XLIII.

EARNINGS OF SPECIALISED OCCUPATIONS.

WE turn now to consider the earnings of all those classes who receive wages, or pay, or salaries, or fees, or whatever the earnings may be called, in return for doing work that requires a greater or less degree of specialised skill, as distinguished from the work that can be done by a general labourer. These classes are numerous ; there are engine-drivers and mechanics of various grades, workmen carrying out particular processes in factories, clerks, and officials of all ranks, doctors and pleaders, engineers and architects, and so on. The amount of specialised skill required may vary greatly from class to class, but in all cases a longer or shorter period of training is required to fit a youth for the particular occupation which he is going to follow. In all these cases the principles hold good that the earnings are determined by the conditions of Demand and Supply, that at any time the earnings of each class tend to be equal to some normal rate, and that the normal rate of earnings of each class alters with the progress made in the development of the country. There are, however, several points of importance which may have a marked effect on the Demand, or on the Supply, of men of a particular class, and may consequently affect the earnings of that class

The market for employees of any particular class differs

in some respects from that for general labour. As we have seen in Chapter XI. there is often a greater degree of mobility among these classes than is the case with general labour, so that in this sense the market is more extensive employers look for men with particular qualifications not merely in their own town but all over India, or even outside its limits, and a large factory in northern India may be found to employ men from many different places—perhaps a few Europeans at the head of its different branches, Parsi mechanics, Bengali clerks, and so on. But in another sense the market is more limited, because the number of men wanted in any class, and also the number available in that class, is very much smaller than the number of general labourers. The market is thus more restricted, and bargaining is not so easily done as in the case of ordinary commodities, or even of general labourers; but, at the same time, the employers of many of these classes make it their business to study very carefully the rates of earnings and the state of supply and demand, and they know very well the rate at which they can expect to get a man of any particular qualifications. And, in the same way, the employees, especially in the higher grades, study closely the same facts, so that in practice the rates are settled almost entirely on a consideration of the number wanted and the number available in the particular class.

The number wanted, or the Demand, depends partly on the natural resources of the country and partly on the state of development which production has reached. The natural resources are important, because they decide the type of industry that is carried on: thus there can be no demand for coal-miners in countries where coal does not exist. But the state of development is also of great importance: there will be no demand for engine-drivers in

a country where production has not got beyond the artisan-stage, and where all work is done by hand ; and the demand will increase as producers extend the use of machinery. Thus as a country progresses, the demand for men possessed of special skill is likely to increase, and the demand for general labourers is likely to become relatively less important.

The Supply in each class is limited in particular by two causes One of these is the influence of caste. A particular kind of work which, under existing social conditions, can be done only by the men of a single caste, may at any time, through changes in the organisation of production, become very important, and a large demand may arise for workmen who are able to do it. But the supply is strictly limited by the number of men in the caste, and if this is small relatively to the demand, the conditions are such that the men may earn very high wages, and continue to earn them for a considerable time. The establishment of a large leather industry, for instance, means a greatly increased demand for workmen of the caste or castes that will handle different kinds of skins, and if such men are scarce, they may earn very high wages ; but in time it is probable that men of other castes, or of other religions, will become willing to do the work, and then the increased supply of workmen will tend to bring wages down from their abnormal level.

The second point is the need of special training before men can make a living in one of these occupations The amount of such training, of course, differs very greatly in different occupations The son of an ordinary labourer can learn how to manage a simple oil-engine in the course of a very few months, while it takes years to train a mechanic of one of the higher grades, or a professional man such as

a pleader or an engineer. In some cases adults can enter one of these occupations, but, as a rule, the main source of supply consists of those for whom the occupation or the profession has been chosen while they are quite young. The supply at any given time is not, therefore, determined merely by facts in existence at that time, but is very largely the result of the decisions made by a large number of parents many years before. Students probably know from personal experience how much care and thought parents in the official and professional classes devote to choosing occupations for their sons; and as production becomes more highly organised the same question begins to trouble skilled workmen of all classes. In making the decision, parents look at many points besides the income that may be expected to be earned; in fact, they do their best to compare what we have spoken of as the Net Advantages of each of the occupations that appear to be within their reach. Students are probably familiar with the comparisons drawn at such times between different branches of the public service; the rate of pay is, of course, important, but the conditions of service in regard to pension and similar matters are also closely scrutinised; the chances of rising to the highest grade, and securing one of the prizes of the service, are taken into account, and the social position is by no means neglected. And when the organisation of production has developed, precisely similar questions have to be settled by engine-drivers, or mechanics, or foremen in factories, or other skilled workmen; they have a choice of various occupations for their sons, and they compare the net advantages of each (and not merely the pay), and choose that of which the net advantages appear to them to be greatest.

The result of this process should be to equalise the net

advantages of occupations in the same grade, because if parents choose that occupation which offers the greatest net advantages, the supply in that occupation will be increased, and its earnings will consequently fall, while occupations which offer the smallest net advantages will be chosen by few parents, the supply in them will fall off, and the earnings must consequently rise. This tendency does in fact exist, and its results are important; but the equalisation of net advantages is very rarely completely realised. The chief reason for this fact is that parents are quite unable to forecast the demand for men in different occupations during the thirty years or so that their children must be expected to work. Changes in production may at any time cause a large sudden demand for employees of a particular class, and may make the skill of employees of other classes practically useless, and these things cannot be foreseen. Parents, especially Indian parents, look very much to the present position, and do not make sufficient allowance for possible changes, and hence we find that the competition for old-established professions or occupations is exceedingly keen, and the rate of earnings in them is lowered, while it is sometimes very hard to find men qualified to work in occupations or professions of more recent establishment, and the earnings in these are relatively high. While, therefore, the tendency to equalise net advantages exists, the time required to adjust the supply, and the difficulty of foreseeing the future, make exact equalisation almost impossible; and at any moment some professions and occupations are overcrowded and their earnings depressed, while the supply in others is inadequate and the earnings abnormally high.

A few examples will make it easier for students to understand what has been said on this point. First, let us look

at the case of clerks able to copy English writing. When the English administration was established in India, the proportion of the population that could read and write was much smaller than it is now, and naturally scarcely anyone knew English, because the language in official use had hitherto been mainly Persian. When then a demand arose for English copyists, very few could at first be found, and those who existed were able to earn large salaries. But parents very soon recognised that in the new conditions a knowledge of English would be an important qualification for an official career, and as more and more boys were taught English, the supply of men able to copy English increased rapidly, and the salary offered for such work fell, until now a man who can merely copy earns no more than many domestic servants. In the same way when typewriters were first introduced there were few clerks who knew how to use them, and people who wanted their work typewritten paid considerably more for this than if it had been copied by hand. Typewriting, however, is an occupation in which the supply can be increased very quickly, because a copyist can learn the art in a month or so, and consequently the deficiency in supply was rapidly made good, and now typists cannot earn much more than copyists; if they want to increase their income they have to acquire the much more difficult art of writing shorthand.

Again, we may take the case of drivers of motor-cars. It is only a few years since motor-cars were introduced into India, and naturally there were no trained drivers in the country, because parents could not have foreseen some years before that the occupation was going to come into existence, nor if they had foreseen it could they have found anyone in India qualified to train their sons. The

first owners of motor-cars had therefore to engage European drivers on very high salaries. But it does not take very long to train a mechanic to be a competent driver, and very soon Indian mechanics began to be trained because they saw they could earn much more as drivers than as mechanics, though they could not get such large salaries as the European drivers. At first they had difficulty in getting the necessary training, but in a short time training classes were established in various parts of India, and now the supply of drivers is about keeping pace with the demand, that is to say, drivers earn incomes that make the net advantages of their employment roughly equal to those of other employments which the same class of men could undertake.

Again, let us consider the profession of the pleader or advocate. This profession cannot be said to have existed before the establishment of regular courts of law, which was carried out gradually by the British administration, but the establishment of the courts was quickly followed by a demand for advocates trained in the law, and able to present their clients' cases in the most favourable light. Such training is not easy to organise, and in the early days the leaders of the profession were mostly Englishmen, who had benefited by the system of training existing in their own country. These leaders made very large incomes, and enjoyed many other advantages in the way of influence and social position, the attractions of the new profession soon became apparent, and while, on the one hand, means of training were provided in the country, on the other hand, large numbers of parents took advantage of these means, and had their children educated for the profession. At the present day the supply of pleaders is at least equal to the demand. The ablest men can still earn very large

incomes, but many pleaders earn very little; and if it were possible to work out the average income of all the pleaders in a city where they are numerous, the average would probably be lower than the average earnings of other professions of the same rank. The difference is accounted for in part by the other advantages of the profession, but taking all the advantages (including the income) into account, it is still probable that pleaders are on the average worse off than men of other professions: that is to say, the present supply is excessive, and the excess is due to the fact that for many years parents have over-estimated the advantages of the pleader's position.

These examples will help students to understand that the adjustment of the supply in these occupations and professions is by no means perfect causes are at work tending to adjust the supply in such a way that the various occupations or professions in the same grade offer equal net advantages, but these causes, from their very nature, work very slowly, and changes in industrial organisation (which may occur with relative rapidity) may entirely upset the adjustment. It follows that any particular occupation or profession may for a considerable period remain over-supplied, or under-supplied, and that its earnings may be less or more than the amount that would result if the supply could be adjusted more rapidly.

Another consequence of the slowness of adjustment is the risk of men being unable to earn a living in the occupation or profession which they have chosen. This occurs when the demand falls off in an occupation which is already fully supplied with workers; the fall in demand may be due to changes in the organisation of production, to new discoveries that make the old ways obsolete, or merely to some change in consumption, but the effect in any case

is that men who are skilled in some particular occupation are no longer able to find employment in it: they must either learn a new occupation or work as general labourers. A simple example may be found in the present position of the water-carrier (*bhishti*) caste in the cities of northern India. Large numbers of these men were formerly employed in watering the streets and gardens, and in the domestic work of Muhammadans and Christians, but when a regular water-supply was introduced, the water-carrier's occupation was much reduced, because most of the domestic work is provided for by house-connections, and the streets are watered from carts. A large proportion of the water-carriers was thus thrown out of work. The men were unable to make a living by the only occupation in which they had special skill, and many of them have taken to general labour, because it is the only means of livelihood within their reach. This condition is spoken of as unemployment, and the risk that it may occur has to be allowed for in every specialised occupation; as the specialisation of occupations increases, unemployment must also be expected to increase in importance, but in the present industrial condition of India it is not a very widespread evil, and its study may for the present be deferred.

CHAPTER XLIV.

EARNINGS OF MANAGEMENT.

WE now come to the last of the claimants for a share in the wealth that is produced ; this is the Producer himself, the man who organises and manages production. We have already seen that, as a matter of fact, the producer usually contributes some other factor of production in addition to his organised work . the cultivator and artisan supply both capital and labour, while in the factory-stage of production the employer usually provides a portion at least of the capital ; and we have to be careful to distinguish the earnings of management from the share due to these other factors.

If, however, we allow for the separation of these items, we see that the producer pays out of his produce the shares of land, capital, and labour, which are determined on the lines indicated in the preceding chapters of this Book, and keeps what is left for himself. His object is two-fold ; he wants to produce at the least possible expense, and he wants to sell at the highest possible price . if he succeeds in these objects, he has an adequate share left for himself after paying the expenses, while if he fails, he has nothing left, or has even lost part of the capital employed . But no ordinary man will undertake a productive enterprise unless he expects to make an income from it, and all

ordinary men will give up such an enterprise if they find that in fact they are not making an income, or are making a smaller income than they could secure in other occupations, and we must therefore regard organisation or management as an occupation to be compared with other occupations which a man can undertake. If we ask why a man chooses to start his son in life as a producer rather than as a pleader or an engineer, we must answer that he regards the net advantages of the one occupation as greater than those of the other; he hopes that his son will be better off as a producer than as a pleader, that is to say, that his whole position (and not merely his income) will be better in the former case than in the latter. We thus see that the supply of producers must be determined on the conditions which we have already seen to be applicable in the case of other occupations requiring specialised skill.

Let us look a little closer at a few of the conditions which affect this occupation. The training required has to be obtained in somewhat different ways from those which will equip a man for a profession. It is true that much that is of value can be learnt at a University or at a Technical Institute. In the latter a youth can learn the sciences that underlie the methods of production, and their application to those methods; if, for instance, he wants to undertake the production of sugar, he will have to study the chemistry and physics of the subject, and learn how the machinery of a sugar-factory is designed to allow the necessary chemical and physical changes to take place, and to prevent the occurrence of undesirable changes; and in most branches of production he will find that he needs some knowledge at least of mechanics, as well as of the chemistry of the materials used. This, however, is only one branch of his training he has also to learn the

commercial side of his business, how to buy cheap, and how to sell dear : and he has to acquire the very difficult art of managing the labourers and workmen employed so as to get the best work at the lowest cost. He needs, that is to say, not merely a knowledge of chemistry and mechanics, but also a knowledge of human nature as it is found among merchants, workmen and labourers ; such knowledge can be acquired only by experience, but the best foundation for it is laid in the course of a good general education, such as the schools and universities aim at supplying. To these qualifications must be added the practical experience of production a student of law requires to spend a good deal of time in the courts, seeing how legal business is actually conducted, before he is in a position to conduct such business himself. a medical student has to spend a long time in a hospital seeing cases treated and operations performed before he is qualified to start practice for himself ; and in just the same way a man who wishes to undertake the management of a factory must get practical experience of how a factory is managed.

The training for this occupation is consequently lengthy, and it is often very difficult to arrange for the practical experience that is required, while, in addition, the youth may have to be provided with a considerable amount of capital to enable him to start a factory, or (what is usually more practicable) to buy a share in an existing concern, and learn his work by working with partners of greater experience. Again, the social position of a producer in India is still inferior as compared with that of a landholder or a professional man : there are signs of a gradual change in this respect, but even now comparatively few parents among the educated classes think of this occupation for their sons, and most of them confine their attention to

government service or to such professions as the law or education. It follows that the races inhabiting northern India do not as yet furnish a large supply of men competent to organise production on a large scale, and most of the producers are drawn either from the families already engaged in similar work, or from men of other races, such as Europeans or Parsis, in whose eyes the disadvantages which have been enumerated count for less. It is obvious then that the earnings must for the present be high in order to attract an adequate supply of men in the conditions which have been described.

It is possible to recognise the demand for men of this kind in a country where production on a large scale has developed extensively, and in such cases we can see that the general Law of Demand applies. But the development of industry in northern India has not yet reached a stage where we can recognise the existence of an employment-market for such men, the numbers demanded, and the numbers available, in any industry are still too small for that. Students must therefore become familiar with the conditions that prevail in countries more advanced in industrial development before they can realise the way in which the earnings of management are determined when large numbers of competent men are looking for a chance of employment, and large numbers of men possessing capital are looking for some one to employ it for them. We may, however, consider what conditions will have to be fulfilled before such an employment-market can be established in India.

One comparatively simple step is the provision of facilities for technical training. We speak of this as comparatively simple because it can be done by government or by the work of a few enlightened individuals, and indeed con-

siderable progress has been made in this direction in the last few years. There are of course great difficulties in the organisation of such institutions, but these difficulties are small compared with the other conditions that have to be realised. One of these is a change in the attitude of the educated classes of Indian society: they must recognise that the greatest evil affecting India is the small amount of wealth produced, compared with the number of people who have to be supported; that increased production requires organisation more than anything else, and that the occupation of the producer is not less respectable, and not less desirable, than the occupations which at present command a social preference. A second condition is a change in the attitude of the people as regards the employment of wealth as capital; the wealth that is lying idle has to be brought into use, and savings have to be employed as they accrue. A third condition is a gradual development in the efficiency of labour; the workers in all grades have to learn how to make the best use of the money which they earn, and to recognise the need for increased technical skill and for more careful training of their children. Some slight progress has already been made towards the realisation of these changes in the attitude of the people; and as the changes progress, the number of producers is likely to increase, the capital that they require for their work will become available, and then the factors of production existing in the country will be more effectively used, and the supply of wealth yielded by them will be increased.

CHAPTER XLV.

SUMMARY THE NATIONAL INCOME.

WE have now examined the way in which the remuneration of the various factors of production is determined. Our examination has been by no means complete, for the subject is very complex, and our present aim is merely to obtain a general view of the main lines of the theory of Distribution, leaving many points to be elaborated further during subsequent study. We have, however, arrived at the following conclusions.

In the case of interest we have seen that, so far as markets for capital have developed, the market rate of net interest is determined by the conditions of demand and supply in very much the same way as the market price of a commodity; and that at any time there is a normal rate of net interest, corresponding to the normal price to which the market price of a commodity tends to return. This normal rate, however, is not permanently fixed, but changes with the changing conditions of the country in a manner that will require much further study. The gross interest paid by a borrower is made up of net interest at the market rate, together with charges for management and for insurance against risk; the amount of these charges varies in individual cases, so that the rate of net interest cannot be ascertained so easily as the price of a commodity, but its

importance is not diminished by the difficulty of ascertaining it. One of the greatest needs of India at the present time is the further development of the market so that producers of all classes may be able to obtain the capital they require on reasonable terms; and as this development proceeds, the theory of interest worked out by economists will become more and more closely applicable to the facts of ordinary Indian life.

In the case of rent also we have seen that the conditions of supply and demand determine the rate paid, but that the rate varies with the fertility of the land. In all countries a stage must be expected to arrive when the demand for fertile land exceeds the supply; and when this stage has been reached, it becomes possible for the landholder to claim as rent the entire produce of the soil after deducting the necessary expenses of its cultivation. In conditions such as prevail in most of northern India, the effect of enforcing this claim may be to leave the cultivator without adequate incentive to maintain the fertility of his land, and in these conditions the State commonly intervenes in the interest of the national income, and limits the amount of the landholder's claim so as to ensure that the cultivator shall have the incentive which is required.

Turning next to wages and earnings, we have traced the influence of the demand and supply of workers in the various grades. We have seen that the demand for labour resembles generally the demand for commodities, but that the supply is affected by various considerations arising mainly from the facts that the worker cannot be separated from his work, and that he is a human being with tastes and prejudices of his own. The market rate of wages is consequently not affected so easily as the market price of a commodity by small changes in the supply and demand, but the visible

effects of larger changes show that the market rate does in fact depend on these forces. The standard of wages at any given time is set by the standard of comfort of the wage-earners, and in no case can a body of workers continue to receive more than their work is worth. Further study of the changes in the standard rate of wages must consequently be directed mainly towards the causes that affect the efficiency of labour, and to the relation that exists between the labourer's way of living and the quality of his work.

* Lastly we have seen that the conditions affecting the work of the producer are similar to those affecting salaried employments requiring particular forms of skill ; but that production in India has not yet been organised to the point where a theory of the earnings of management can be based on the facts of Indian life.

These conclusions carry us some way in our study. But in an examination conducted in this way it is easy to overlook the mutual influences of changes in the remuneration of different factors, we do not realise sufficiently how changes in the wages of some classes may affect the wages of others, or how changes in rent or interest may affect the whole community, and not merely the classes who pay or the classes who receive. Before leaving the subject, therefore, let us try and view the problem of distribution in its broadest possible aspect.

We may regard the whole nation as a single community engaged in producing wealth ; and we may regard the whole of the wealth produced as the National Income, by the consumption of which the nation lives. All the working members of the nation, from the labourer working in the field to the owner of a large factory, assist in producing this income, all of them are supported out of it, but they do not consume it all. Some of the income has to be applied

in replacing the capital used up in its production ; while in all nations a portion of it is employed in the support of the unproductive classes of the population. The first and obvious interest of the nation as a whole is that the National Income should be as large as possible. To secure this object, each of the factors of production must be used in the most effective manner possible · the land must be so cultivated as to yield the largest produce consistent with the maintenance of its fertility ; the men who work, whether with their hands or with their brains, must be efficient in the widest sense of the word ; and the accumulated wealth must be so used as to give the greatest possible assistance to the workers. The nation as a whole is interested in seeing that these conditions are fulfilled, and it sets aside a share¹ of the national income in order that the government (which represents it) may deal with those questions which require the common action of the people. The other questions it leaves to be dealt with according to the judgment of individuals, but as we have seen each individual does not decide all these questions consciously for himself, but is guided in many of them by the custom which expresses the general view of at least a portion of the nation. Thus, the action of the individual may be determined in one of three ways ; by law, by custom, or by his own judgment. To take an instance, the government is charged with seeing that every individual enjoys his own property, and endeavours to secure this by punishing thieves and cheats, and by com-

¹ This share may be provided in the form of taxation, as, for instance, when the government takes as income-tax five pacs out of every rupee that a man receives. It may also be provided by setting aside some particular factors of production to be managed by the government thus, in India, the government manages very large areas of forests, and also the water-supply furnished by the larger rivers.

selling them to restore to its owner any property which they have wrongfully taken, the manner in which the individual enjoys his property is on the other hand determined very largely by custom, while he uses his own judgment in acquiring property, or in parting with it.

We have assumed throughout our study that a government exists which secures to each individual his freedom to use his own judgment, and the enjoyment of his share of the national wealth. On this assumption, we find that the extent of the National Income depends in the long run mainly on the character of the individuals who make up the nation for this character determines not only the nature of their decisions, in cases where they use their judgment, but also the nature of the customs to which they conform. If a nation is to enjoy a large and increasing National Income, the individuals who compose it must be hard-working, intelligent and thrifty. Hard work (whether the work is done by the hand or by the brain) is as we have seen the first condition of efficiency in production. Intelligence is necessary to secure the proper organisation of production, and its adaptation to changing circumstances. Thrift implies a clear realisation of the needs of the future and a steady effort to provide for them, (the word thus covers the proper regulation of consumption so as to secure efficiency, the avoidance of waste, the accumulation of a store of wealth to be employed as capital, and the training of each new generation to be more efficient than its parents.)

The Distribution of this National Income may be carried out in more ways than one. We have examined it on the assumption of Industrial Freedom (Chapter IV) and we have found reason to conclude (though we have not examined all the reasons) that where Industrial Freedom prevails the share of each individual and of each class tends

to vary with efficiency, the most efficient man and the most efficient class getting the largest share. But the individual and the class are dependent on the rest of the nation, because the amount of their share depends on the amount of the National Income; and the inefficient who diminish this, diminish not only their own share but the shares of all other classes. When labour is inefficient there is less income to divide, and it is not only the inefficient labourers who suffer but also the efficient men whose work and whose capital would yield them a larger share if labour played its part. In the same way the inefficient organisation of production means not only a smaller income for the inefficient producers but also a reduced National Income, and consequently a reduction in the shares of capital and labour.

The main economic advantage of the system of Industrial Freedom is then that it offers a reward for efficiency in the shape of a larger share of the National Income, and thus provides an incentive to individuals to increase their efficiency. If this incentive were felt by all the individuals with sufficient intensity, then every individual in the nation would work his hardest to attain the greatest possible efficiency, and the National Income would be raised to the highest possible amount. We know by experience that the incentive is sufficient in the case of a large number of individuals, and we know that with a large number it fails, because we can see every day some individuals working with entire efficiency, and others working very inefficiently or not working at all. The success of Industrial Freedom depends, therefore, on the extent to which the reward of efficiency is an adequate incentive.

The main economic drawback of the system is that the inefficiency of some classes of the people will reduce the National Income as a whole, and that thus the efficient

suffer because others are inefficient. The extent of this evil is also a question of degree. If the great majority of the nation is efficient, the loss caused by the inefficient minority will not be of great importance, while the efforts of an efficient minority may be very inadequately rewarded if the bulk of the nation is inefficient.

The system of Industrial Freedom does not, therefore, offer anything approaching to a certainty either that the National Income will be maintained at the highest possible level, or that the reward offered to efficiency will be an adequate incentive. And people who feel these drawbacks strongly frequently urge that the system should be changed and that the nation as a whole, acting through its government, should so regulate the production, or the consumption, or the distribution of wealth, or all of these, as to secure these objects more effectively. Proposals of these kinds may be described in general terms as Communism or Socialism, and students will have to study them at a later stage. They are supported by various arguments that lie outside the scope of our science, but in examining them from the economic standpoint the main questions to be borne in mind are: Will they lead to an increase in the National Income? and, Will they furnish a greater incentive to efficiency?

We have seen that in India the system of Industrial Freedom has in one most important respect been departed from in the interests of the nation as a whole, namely, in the laws that restrict the rate of rent, and we have seen that the economic reason justifying this restriction is the need for an incentive to secure the efficiency of the cultivator. In smaller matters, too, the Indian government has already interfered with the system, as in the legislation which in some cases restricts the hours of labour in factories or

imposes conditions regarding the employment of women and children; and students will probably find that as time goes on an increasing proportion of the measures put forward by statesmen and politicians will involve interference with Industrial Freedom. Such measures will be supported and opposed on many grounds, but their economic effect will always be a question of importance; and one of the chief advantages of the study of Economics is to ensure a due appreciation of the economic aspect of all proposals which would affect the nation in the business of its daily life.

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